CHILDREN AND YOUTH WITH SEVERE HANDICAPS: EFFECTIVE COMMUNICATION

A SYMPOSIUM, AUGUST 19-21, 1985, WASHINGTON, DC

CHILDREN AND YOUTH WITH SEVERE HANDICAPS:

EFFECTIVE COMMUNICATION

A Symposium

August 19-21, 1985

Washington, DC

Special Education Programs
Office of Special Education
and
Rehabilitative Services
U. S. Department of Education
and
Technical Assistance Development System

CHILDREN AND YOUTH WITH SEVERE HANDICAPS:

EFFECTIVE COMMUNICATION

A Symposium

August 19-21, 1985

Washington, DC

TO THE READER OF THESE PROCEEDINGS

In November, 1984 the Council of Language, Speech, and Hearing Consultants In State Education Agencies set forth to gather together professional persons involved in the acquisition and enhancement of effective communication by children and youth with severe handicaps.

With the assistance of the Special Education Programs, Office of Special Education and Rehabilitative Services, U. S. Department of Education and the Technical Assistance Development System (TADS), Chapel Hill, NC, this gathering occurred August 19-21, 1985 in Washington, DC as the symposium, Children and Youth With Severe Handicaps: Effective Communication.

The following material includes the major contributions forthcoming from the symposium. Particular credit is given to Rhonda Work, President, Council for Language, Speech, and Hearing Consultants In State Education Agencies and to Kathleen Stremel-Campbell, Teaching Research Division, Oregon State System of Higher Education and member of The Association for Persons With Severe Handicaps (TASH). Both were the planners and prime program developers of the symposium. Kevin Shanahan and Michael Qualls, TADS, administered the symposium.

These Proceedings have been set forth as if you, the reader, were to be and were a participant at the symposium. In keeping with this chronological presentation of the symposium's activities, the Proceedings are presented in three sections: 1) An Introduction to the Symposium; 2) Discussion Papers and Reactions; 3) Consensus Statements.

An Introduction to the Symposium:-This section consists of material which lays the ground work for understanding and interpreting the temper of the Discussion Papers, the Reactions, and the Consensus Statements. Included in the Introduction are: the memorandum sent by Patricia J. Guard, Acting Director, Special Education Programs, to the State directors of special education; the list of participants who attended the symposium and helped develop the Consensus Statements; the agenda for the symposium and who was in what group from which many of the Consensus Statements originated; the Goals and Objectives of the symposium; the operational definition of 'severely handicapped'

which was the definition used by the group when creating the Consensus Statements; and the welcoming address by Patricia J. Guard that tells why the particular participants were encouraged to attend this symposium.

Discussion Papers and Reactions:-This section includes the texts of the two Discussion Papers, one by David Yoder and Francisco Villarruel and the other by James McLean. Copies of these Papers were available for the participants prior to their presentation. There are six Reactions, three each to the Discussion Papers.

Consensus Statements:-These 33 Statements originated either in the individual group discussions or from the participants as a group. It is in this section that the beliefs, goals, and objectives of the participants toward the communication welfare of children and youth with severe handicaps are set forth.

It is the desire of the consultants to this symposium that the reader study these Consensus Statements, share them with fellow workers, add to the Statements, question them. The reader is encouraged to share these thoughts with members of the symposium. The participants' names and addresses are included in these Proceedings. Further, the Division of Innovation and Development, Special Education Programs, U. S. Department of Education welcomes agenda ideas for future meetings on the subject, "Children and Youth With Severe Handicaps: Effective Communication". This 1985 symposium was a beginning.

SECTION I

AN INTRODUCTION TO THE SYMPOSIUM

- Memorandum from Patricia J. Guard
  Acting Director, Special Education
  Programs, to State Directors of
  Special Education

- List of Symposium Participants

- Symposium Agenda

- Symposium Goals and Objectives

- Operational Definition of 'Severely
  Handicapped'

- Welcoming Address
  Patricia J. Guard
  Acting Director
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UNITED STATES DEPARTMENT OF EDUCATION
WASHINGTON, D.C. 20202

JL - 1 1985

Contact Person

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SEP-85-26

SEP MEMORANDUM

TO : State Directors of Special Education

FROM : Patricia J. Guard, Acting Director Patricia J. Guard
Special Education Programs

SUBJECT: ANNOUNCEMENT - Request for the Appointment of Representatives to the Forthcoming Symposium, Children and Youth With Severe Handicaps: Effective Communication.

I am pleased to announce that Special Education Programs (SEP), in conjunction with the Technical Assistance Development System (TADS), will be presenting the symposium, Children and Youth With Severe Handicaps: Effective Communication.

The purpose of the symposium is to identify and develop options for quality communication services for children and youth who are severely handicapped in order to increase effective communication exchanges, and to identify the roles of multidisciplinary professionals in providing communication, language, and audiological services for these children.

The faculty for this symposium is exemplary. David Yoder, Ph.D., University of Wisconsin, Madison, will write and present a paper on identifying and developing options for quality communication services for children with severe handicaps. James McLean, Ph.D., Parsons Institute and University of Kansas, will write and present a paper on identifying roles of the multidisciplinary professionals providing communication and audiological services to this diverse population of youngsters.

These two papers will be reviewed by selected panelists who include: Stan Dublinske, Pat Ellis, William Geiger, Lee Gruenewald, John Moore, and Barry Prizant. The papers and their reviews will serve as the pivot point from which each symposium participant will help develop statements on obtaining effective communication interactions for children and youth who are severely handicapped. Consensus will be reached on these statements where possible. The statements will then be written up, reviewed by those in attendance, and shared with State Department personnel. Drs. Bud Fredericks and Betty Jane Philips will direct the symposium in this activity.

The symposium will start the evening of Monday, August 19 and end at noon on Wednesday, August 21, 1985. It will be held at the L'Enfant Plaza Hotel, Washington, D.C.

We invite you to appoint representatives to attend this exciting meeting. It is the goal of this gathering to have participants develop statements which will help guide all of us toward acquiring and maintaining quality communication services for severely handicapped children and youth. TADS will be able to pay the per diem costs (housing, meals, and registration fee) of one staff member. Travel will not be reimbursed by TADS.

While we can provide per diem for only one representative, we sincerely hope that more than one representative from your SEA can attend. The communication needs of severely handicapped children are so extensive that each SEA special education staff member has the potential for providing input to this symposium. We encourage you to review your many programs to see if attendance to this meeting can be funded through one or more of the budgets involved.

Please have each representative complete an individual copy of the enclosed reservation form. Indicate which one will receive the per diem reimbursement from TADS. Send the completed reservation forms to Kevin Shanahan by July 8, 1985.

Upon the receipt of the completed reservation forms, the participants will receive information from the L'Enfant Plaza Hotel. Special rates have been acquired for symposium participants at the L'Enfant Plaza Hotel: single occupancy, $60.00 plus tax, double occupancy, $75.00 plus tax, per night. There will be a symposium registration fee of $25.00 to help defray costs.

We are looking forward to seeing many of you and your staff at the symposium, August 19 - 21, 1985. If you would like further information, please call Kevin Shanahan, (919) 962-2001.

Enclosure

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Children and Youth with Severe Handicaps:
Effective Communication Interactions
August 19-21, 1985
L'Enfant Plaza
Washington, D.C.

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AGENDA AND GROUP ASSIGNMENTS

Children and Youth With Severe Handicaps:
Effective Communication
August 19-21, 1985
L'Enfant Plaza Hotel
Washington, DC

MONDAY EVENING, AUGUST 19, 1985

5 - 7 p.m.	Registration	L'Enfant Ballroom Foyer
7 - 9 p.m.	SESSION 1	L'Enfant Ballroom A

Dinner

Program:

Introductions	Sara Conlon Special Needs Section Division of Innovation and Development Special Education Programs
Welcome	Thomas Behrens Director, Division of Innovation and Development Special Education Programs
	Patricia J. Guard Acting Director, Special Education Programs Office of Special Education and Rehabilitative Services
Symposium Activities	Rhonda Work President, Council of Language, Speech, and Hearing Consultants in State Education Agencies
	Kathleen Stremel-Campbell Teaching Research Oregon State System of Higher Education

9 - 10:30 p.m.	Social Gathering Cash Bar	L'Enfant Ballroom C

Agenda
Children and Youth With Severe Handicaps

TUESDAY MORNING, AUGUST 20, 1985

8 - 8:45 a.m.	Continental Breakfast and Registration	L'Enfant Ballroom Foyer
8:45 - 10:15 a.m.	SESSION 2	L'Enfant Ballroom B

Rhonda Work, Chair

Discussion Paper: Toward A System for Developing Communicative Competence for Severely Handicapped Children and Youth.

David E. Yoder, Presenter

The Discussion Paper was prepared by David E. Yoder and Francisco Villarruel, Department of Communicative Disorders and Waisman Center on Mental Retardation, University of Wisconsin-Madison.

Reactors to Discussion Paper:

Pat Ellis, Associate Superintendent, Special Education and Student Services, Oregon Department of Education

John Mick Moore, State Coordinator, State Programs for Deaf-Blind Center, Seattle

Barry Prizant, Head, Communication Disorders Department, Bradley Hospital, East Providence, Rhode Island

10:15 - 10:45 a.m.	Coffee Break	L'Enfant Ballroom Foyer
10:45 - 12:15 p.m.	SESSION 3	L'Enfant Ballroom B

Kathleen Stremel-Campbell, Chair

Discussion Paper: Identifying the Roles of Multidisciplinary Professionals in Providing Communication Services to Severely Handicapped Children and Youth.

James McLean, Presenter

The Discussion Paper was prepared by James McLean, Senior Scientist, Bureau of Child Research, University of Kansas, and Parsons Research Center, Parsons, Kansas.

Reactors to Discussion Paper:

Stan Dublinske, American Speech-Language-Hearing Association Rockville, Maryland

William Geiger, Department of Rehabilitation and Special Education, University of Arkansas/Little Rock

Lee Gruenewald, Director, Integrated Student Services, Madison Metropolitan School District, Madison, Wisconsin

Agenda
Children and Youth With Severe Handicaps

TUESDAY AFTERNOON, AUGUST 21, 1985

12:15 - 1:30 p.m. LUNCH L'Enfant Ballroom A

1:30 - 4:30 p.m. SESSION 4 Group Meeting Rooms

Group 1: Barbara Gantwerk, Chair. Group members are designated by green dot on name tag.
Room: Montcalm Salon

Group 2: Betsy Minor, Chair. Group members are designated by silver dot on name tag.
Room: La Salle Salon

Group 3: Kay Robinson, Chair. Group members are designated by yellow dot on name tag.
Room: Lafayette Room

Group 4: Lucy Hession, Chair. Group members are designated by blue dot on name tag.
Room: Caucus Room

Group 5: Melvin Bruntzel, Chair. Group members are designated by black dot on name tag.
Room: Quorum Room

Group 6: Art Farnum, Chair. Group members are designated by navy dot on name tag.
Room: Ballroom B

Group 7: Mary Cole, Chair. Group members are designated by gold dot on name tag.
Room: Marquette Room

Group 8: Joe Freilinger, Chair. Group members are designated by red dot on name tag.
Room: Monet #1 (second floor)

NOTE: Between 2:30 - 3:00 p.m. Coffee/Soda Break L'Enfant Ballroom Foyer

4:30 - 5:30 p.m. SESSION 5 L'Enfant Ballroom C

Kathleen Stremel-Campbell, Chair

Group Reports by Group Chairs

5:30 ----Evening Free

Agenda
Children and Youth With Severe Handicaps

WEDNESDAY MORNING, AUGUST 21, 1985

8 - 8:45 a.m.	Continental Breakfast	L'Enfant Ballroom Foyer
8:45 - 10 a.m.	SESSION 6	Group meeting rooms

Review of work and completion of individual group's consensus statements.

Each group meets in the same room as Tuesday afternoon group session.

10 - 10:30 a.m.	Coffee Break	L'Enfant Ballroom Foyer
10:30 - 12 noon	SESSION 7	L'Enfant Ballroom B

Rhonda Work, Chair

Developing Consensus Statements Based on Group Work Sessions

CoLeaders of Session:

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Research Professor
Teaching Research
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Betty Jane Philips
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12 Noon — Completion of Green Evaluation Form

End of Symposium

GROUPS
Children and Youth With Severe Handicaps:
Effective Communication
August 19-21, 1985
L'Enfant Plaza
Washington, DC

MONTCALM SALON

GROUP 1: Chair -- Barbara Gantwerk - New Jersey, Planning Associate

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Pat Hollis	Florida	Severely Handicapped
Brenda Barron	Louisiana	Employer Supported-Parent Ed
June Miller	Montana	Deaf/Blind
John Saylor	Ohio	Severely Handicapped
June Downing	Kansas	TASH Coordinator D/B
Kenneth Bird	Nebraska	Special Ed Coord-Omaha
Lee Gruenewald	Wisconsin	Director, Intergrated Stdnt Srvcs

LA SALLE SALON

GROUP 2: Chair -- Elizabeth (Betsy) Minor - Virginia, Speech, Language, Hearing

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Marlene R. Bryar	Georgia	Moderately/Severely MR
Kaye Eichler	Louisiana	Speech and Language
Ann Bird	Nebraska	Speech and Language
Charlotte Hood	Oklahoma	Multiple-Handicapped and D/B
JoAnne Hopkins	New York	Coordinator, Northeast D/B Project
Clare Colton	Virginia	Ed for Handicapped Law Report
John Mick Moore	Washington	State D/B Programs

Groups

LAFAYETTE ROOM

GROUP 3: Chair -- Kay Robinson - Illinois, Speech and Language

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Jane S. Festerling	Hawaii	Speech,Language,Hearing
John Haigh	Maryland	D/B Program, Director
Jane Weissman	New Hampshire	Education Consultant
Mary Brady	Pennsylvania	Assistive Device Specialist
Robert Sturey	West Virginia	Assistant Director, Sp Ed, SEA
Tom Clark	Utah	Utah State University, SKI-HI
Jenny Lang	Wisconsin	Early Childhood-Sp. Ed.

CAUCUS ROOM

GROUP 4: Chair -- Lucy Hession - Maryland, Coordinator, Comprehensive SPD

Eleanor Clark-Thomas	California	Consultant, SEA
Frances Warkomski	Pennsylvania	TA for Sensory-Impaired
Richard Mecham	Utah	Director, Sp Ed, Alpine Schl Dstrct
Bill Geiger	Arkansas	Assoc. Professor, U. of Arkansas/LR
Tony Hecimovic	Connecticut	Database, U. of Connecticut
David Aldrich	Virginia	Severely/Profoundly Handicapped
Pat Ellis	Oregon	Associate Superintendent, Sp. Ed.
Charlotte Royeen	DC	Ed. Research Specialist/SEP

Groups

QUORUM ROOM

GROUP 5: Chair -- Melvin Bruntzel - Kansas, Language, Speech, and Hearing

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Cynthia Bill	Indiana	Severely Handicapped
Velma Allen	Michigan	Supperintendent, School for Blind
Cynthia Gallagher	New York	Secondary Issues
Betty Berry	Tennessee	Speech and Hearing
Lori Goetz	California	Director, Southwest Region, D/B
Stan Dublinske	Maryland	ASHA
Dick Bartlett	Maine	Consultant, Ex. Children Ed.

BALLROOM B

GROUP 6: Chair -- Art Farnum - Vermont, Speech, Language, and Hearing

Otassa Boston	DC	Program Specialist
Debra Russum	Mississippi	State Consultant
Shelby Niebergall	North Dakota	Assistant Director, Sp. Ed., SEA
Kent Logan	Georgia	Coordinator, Southeast Region, D/B
Sarah Blackstone	Maryland	ASHA, Assistive Devices
Barry Prizant	Rhode Island	Head, Com. Disorders, Bradley Hsptl
Philippa Campbell	Ohio	Family Child Learning Center

Groups

MARQUETTE ROOM

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Lois McDermott	Minnesota	Assistant State Director, Sp. Ed.
Nineval Murray	North Carolina	Speech-Language
Adriana Schuler	California	Dept. of Sp. Ed., SFSU
Tom O'Toole	Maryland	Director, Dept. of Sp. Ed., Mntgmy Cnty
Anita Briggs	Georgia	Research Assistant, D/B TA Project
Fran Watkins	Ohio	Parent

MONET #1 (SECOND FLOOR)

GROUP 8: Chair -- Joe Freilinger - Iowa, Clinical Speech-Language Programs

Gail R. Houle	DC	Communicative and Sensory Disorders
Preston Lewis	Kentucky	Curriculum Development
John Heskett	Missouri	Coordinator, Sp. Ed.
Julie Todd	Ohio	Central Ohio RRC, Severely Handicapped
Brenda Needham	Vermont	Learning Impaired-Secondary Programs
Martha Major	Massachusetts	Assistant Supervisor, D/B, Perkins
Francisco Villarruel	Wisconsin	Research Assistant, U of WI/Madison

UNITED STATES DEPARTMENT OF EDUCATION

WASHINGTON, D.C. 20202

SYMPOSIUM

CHILDREN AND YOUTH WITH SEVERE HANDICAPS: EFFECTIVE COMMUNICATION

August 19-21, 1985

L'Enfant Plaza Hotel, Washington, DC

GOALS AND OBJECTIVES FOR SYMPOSIUM

I. To identify and develop options for quality communication services for children and youth who are severely handicapped in order to increase effective communication exchanges:

   A. To identify functional communicative skills within life skill activities;

   B. To identify appropriate services based on the diverse nature of the target population and the individual needs of the family;

   C. To identify appropriate, validated procedures that can be implemented by a number of professionals;

   D. To identify how the targeted population and their families can be assisted by technology.

II. To identify the roles of multidisciplinary professionals in providing communication and audiolgical services to children and youth who are severely handicapped and in evaluating those services:

   A. To develop a process to identify the preservice, inservice, and consultant services provided by State education agencies, technical assistance agencies, and professional organizations to assist local education agencies, consumers, and their families;

   B. To identify the process for the development of effective service delivery models and the personnel responsible for these services;

   C. To develop a process to evaluate the quantity and quality of services being provided.

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Supported by: Technical Assistance Development Systems

Developed by: Rhonda S. Work, President, Council of Language, Speech, and Hearing Consultants in State Education Agencies; and
Kathleen Stremel-Campbell
Teaching Research Division
Oregon State System of Higher Education

Operational Definition of Severely Handicapped Children and Youth

"(1) As used in this part, the term "Severely handicapped children and youth" refers to handicapped children and youth who, because of the intensity of their physical, mental, or emotional problems, need highly specialized educational, social, psychological, and medical services in order to maximize their full potential for useful and meaningful participation in society and self-fulfillment.

"(2) The term includes those children and youth who are classified as seriously emotionally disturbed (including children and youth who are schizophrenic), autistic, profoundly and severely mentally retarded, and those who have two or more serious handicapping conditions, such as the deaf-blind, mentally retarded-blind, and the cerebral-palsied deaf.

(3) Severely handicapped children and youth --

(i) May experience severe speech, language, and/or perceptual-cognitive deprivations, and evidence abnormal behaviors such as--
(A) Failure to respond to pronounced social stimuli;
(B) Self-mutilation;
(C) Self-stimulation;
(D) Manifestation of intense and prolonged temper tantrums;
(E) The absence of rudimentary forms of verbal control; and
(ii) May also have extremely fragile physiological conditions."

(20 U.S.C. 1424 34 CFR 315.4(d))

WELCOMING REMARKS

FOR

PATRICIA J. GUARD

SYMPOSIUM ON
CHILDREN AND YOUTH WITH SEVERE HANDICAPS: EFFECTIVE COMMUNICATION
AUGUST 19-21, 1985

IT IS A PLEASURE TO HAVE THE OPPORTUNITY TO WELCOME YOU TO THIS SYMPOSIUM ON CHILDREN AND YOUTH WITH SEVERE HANDICAPS: EFFECTIVE COMMUNICATION. THE TOPIC IS WELL DESERVING OF THE ATTENTION AND INDIVIDUAL PERSPECTIVES ALL OF YOU BRING TO THIS MEETING. IT IS AN AREA THAT NEEDS THE BEST THINKING WE CAN GET -- AND THAT'S WHAT I BELIEVE WE HAVE GATHERED HERE FOR THE NEXT FEW DAYS.

OVER THE YEARS, THE FEDERAL GOVERNMENT HAS ENCOURAGED THE DEVELOPMENT AND EXPANSION OF EDUCATIONAL PROGRAMS TO ASSIST CHILDREN AND YOUTH WITH SEVERE HANDICAPS. SLOWLY, WE HAVE SEEN THESE CHILDREN BEING BROUGHT INTO THE WORLD OF FORMAL EDUCATION FROM BEING ALONE IN THE FAMILY'S HOME, TO BEING LINKED THROUGH THE USE OF THE TELEPHONE WITH THE CLASSROOM DOWN THE ROAD; TO THE MOVING INTO THE SOPHISTICATED CLASSROOM IN THE WING OF A REGULAR SCHOOL, AND INTO THE REGULAR SCHOOL ITSELF--TO MENTION ONLY A

FEW OF THE NUMEROUS MODIFICATIONS WHICH HAVE OCCURRED AS TO WHERE A SEVERELY HANDICAPPED CHILD HAS AND IS RECEIVING FORMAL EDUCATION TODAY.

THROUGHOUT THESE VARIOUS ADVANCEMENTS, ONE FACT HAS REMAINED CONSTANT: AS DAVID YODER QUOTED FROM RICKY CREECH: I KNOW OF NO OTHER HANDICAP AS GREAT, OR HAVING AN EFFECT ON A PERSON'S PSYCHOLOGICAL AND SOCIOLOGICAL DEVELOPMENT, AS BEING UNABLE TO SPEAK. INHERENT IN THIS FACT HAS BEEN ANOTHER, AND THAT IS THAT NO ONE PERSON INVOLVED WITH THIS CHILD'S LIFE HAS BEEN THE ONLY PERSON SOLELY RESPONSIBILE FOR THE CHILD'S COMMUNICATION GROWTH AND DEVELOPMENT. FROM THE BUS DRIVER, THE CLASSROOM TEACHER, THE OCCUPATIONAL THERAPIST, THE SCHOOL PSYCHOLOGIST, THE SCHOOL PRINCIPAL, THE TEACHER'S AID, THE PHYSICAL THERAPIST, THE FELLOW STUDENTS, THE SPEECH-LANGUAGE CLINICIAN, THE MOTHER, FATHER, GRANDPARENTS, SISTERS, BROTHERS, AUDIOLOGIST--TO MENTION ONLY SOME OF THE OBVIOUS PERSONS--EACH PERSON IS INVOLVED WITH THE WORLD OF COMMUNICATION FOR AND WITH THESE CHILDREN.

AS WE IN THE FEDERAL GOVERNMENT SURVEY THE NEEDS OF THESE CHILDREN, THEIR FAMILIES, AND THE NEEDS, ALSO OF THE SYSTEMS WHICH ARE COMMISSIONED TO PROVIDE THE PERSONNEL, SCHEDULING, FACILITIES, TRANSPORTATION, EQUIPMENT, AND MATERIALS TO BRING ABOUT QUALITY EDUCATION FOR OUR CHILDREN, WE REALIZE THAT STATE EDUCATION AGENCY

PERSONNEL FULFILL AN IMPORTANT LINK IN THE DEVELOPMENT OF THESE SYSTEMS. YOU ARE THE ONES WHO QUIETLY OR PERHAPS VOCIFERIOUSLY PRODE LOCAL SUPERINTENDENTS INTO SEEING HOW EMPLOYING QUALITY PERSONNEL WILL ADVANCE CHILDREN MORE QUICKLY THAN IF PERSONNEL WHO ARE NOT QUALIFIED ARE EMPLOYED: YOU ARE THE ONES WHO CAN HELP DESIGN INSERVICE EDUCATION PROGRAMS FOR A POPULATION OF TEACHERS WHICH IS TOO SMALL IN NUMBER FOR EVEN OUR LARGER SCHOOL DISTRICTS TO SUPPORT; YOU, AT THE STATE LEVEL, CAN HELP BRING TOGETHER THE BRAINS IN YOUR STATE TO UNRAVEL PROBLEMS WHICH EACH OF YOU IS FACING.

AND THAT IS WHY WE AT SEP HAVE INVITED YOU TO BE WITH US HERE FOR TUESDAY AND PART OF WEDNESDAY.

WE NEED YOUR ASSISTANCE.

YOU WILL BE DIVIDING INTO GROUPS AFTER YOU HEAR THE EXCELLENT POSITION PAPERS PREPARED BY DAVID YODER AND JIM MCLEAN AND THE RESPONSES FROM THE REACTORS. THE GOALS AND OBJECTIVES YOU HAVE RECEIVED WILL BE THE PIVOT POINT OF THE DISCUSSIONS. THE FIRST GOAL IS TO IDENTIFY AND DEVELOP OPTIONS FOR QUALITY COMMUNICATION SERVICES FOR CHILDREN AND YOUTH WHO ARE SEVERELY HANDICAPPED IN ORDER TO INCREASE EFFECTIVE COMMUNICATION EXCHANGES. THE SECOND GOAL IS TO IDENTIFY THE ROLES OF MULTIDISCIPLINARY PROFESSIONALS

IN PROVIDING COMMUNICATION AND AUDIOLOGICAL SERVICES TO THESE CHILDREN AND YOUTH, AND IN EVALUATING THOSE SERVICES.

THANK YOU IN ADVANCE FOR CARING, SHARING, AND BEING WITH US.

LET ME CLOSE BY WELCOMING YOU ALL AGAIN TO THE OPENING SESSION OF A SYMPOSIUM THAT HAS ALL THE EARMARKS OF BEING ABLE TO PROVIDE SOME SOLID GUIDANCE IN AN AREA OF HIGH CONCERN TO US ALL-- EFFECTIVE COMMUNICATION FOR CHILDREN AND YOUTH WITH SEVERE HANDICAPS.

BEST WISHES FOR A SUCCESSFUL MEETING.

SECTION II

DISCUSSION PAPERS AND REACTIONS

- Toward A System for Developing Communicative Competence for Severely Handicapped Children and Youth - by David E. Yoder and Francisco Villarruel

- Reactions -

  - Patricia A. Ellis

  - John Mick Moore

  - Barry Prizant

- Identifying the Roles of Multidisciplinary Professionals in Providing Communication Services to Severely Handicapped Children and Youth - by James E. McLean

- Reactions -

  - Stan Dublinske

  - William Geiger

  - Lee Gruenewald

TOWARD A SYSTEM FOR DEVELOPING COMMUNICATIVE COMPETENCE FOR SEVERELY HANDICAPPED CHILDREN AND YOUTH

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and

Francisco Villarruel

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Prepared for the Symposium:

CHILDREN AND YOUTH WITH SEVERE HANDICAPS:
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INTRODUCTION

Over the years, we as a society have gone through a major change in our attitudes and acceptance of severely handicapped children and youth. With each new development, however, we can identify additional barriers which must be overcome to provide adequate services.

The increase in services for severely handicapped children and youth has been based upon four major assumptions. First, the recognition that severely handicapped children and youth can improve their level of functioning if they are given the proper opportunity, and in some cases, the proper technology. The philosophical basis of this first assumption is derived, in part, from the second reason why we have seen an increase in services for severely handicapped children and youth: i.e., an increased acceptance and development of the perspective of individualization. Although "diagnostic" labels are still popular, professionals have come to view severely handicapped children and youth as being unique persons, with unique problems, and demonstrating unique challenges for educational, vocational and rehabilitative professionals.

Third, services are on the increase due to the increase in and provision of educational, medical, rehabilitative, vocational and legal rights for severely handicapped individuals. The development of many of these services can be attributed to the legal mandates (e.g., PL 94-142, the Rehabilitation Act of 1973) which specifically address the needs of the severely handicapped. These mandates resulted in an increase in funded research, funds for the development of some innovative curricula and the establishment of educational/vocational centers for the severely handicapped.

Finally, changes in our attitudes toward the severely handicapped may be related to an increased emphasis on the prevention of developmental disabilities and secondary handicaps. Social service agencies have provided

invaluable services in an effort to educate eligible mothers of proper nutrition and medical care to prevent birth complications such as prematurity. Screening programs have also been developed which can detect causative medical disorders such as PKU. For children born with handicaps, research and development of early intervention programs which focus upon the provision of infant stimulation and parent education are also available.

In this paper, we will attempt to outline some major barriers to adequate service delivery for severely handicapped. As can be seen in Figure 1, we consider two major sources (or barriers) which function to interfere with the acquisition and development of functional communicative competence for severely handicapped children and youth: Intrapersonal and Interpersonal barriers. The perspective we maintain is that the change agents can serve as the major force in the remediation of these barriers. This perspective is based upon two assumptions. First, that communication interactions are a multidimensional, multichannel phenomena in which the interactants' behaviors are coordinated across temporal dimensions, and influenced by the interactants themselves (Higginbotham & Yoder, 1982). Second, that changes in one part of the system or in the barriers which are encountered by the severely handicapped child or youth may change other parts, which in turn, could affect the total system (Karan & Berger, in press).

Defining the Severely Handicapped: A Problem With Current Terminology

What constitutes a condition which can be described as severely handicapped? This is a question which researchers, teachers and clinicians have attempted to resolve for many years (e.g., Baker, 1979; Dollar & Brooks, 1980; DuBose, 1979a; Fewell & Cone, 1983; Sontag, Smith & Sailor, 1977). Unfortunately, there has been no resolution to this question. The term "handicapped" is used to describe children who deviate from the average or norm in (1) mental/cognitive characteristics, (2), sensory abilities, (3)

neuromotor or physical characteristics, (4) social behavior, (5) communication abilities, or (6) multiple combinations of the differences listed above.

Perhaps the most widely accepted definition of severely handicapped was developed by the Bureau of Education for the Handicapped (U.S. Office of Education, 1975). According to this definition:

> Severely handicapped children are those who because of the intensity of their physical, mental, or emotional problems, need educational, social, psychological and medical services beyond those which are traditionally offered by regular and special education programs, in order to maximize participation in society and self-fulfillment. Such severely handicapped children may possess severe language or perceptual-cognitive deprivations and evidence a number of abnormal behaviors including failure to attend to even the most pronounced stimuli, self-mutilation, manifestations of durable and intense temper tantrums, and the absence of even the most rudimentary forms of verbal control. They may also have extremely fragile physiological conditions. (Sec 121.2).

Dollar and Brooks (1980) suggest that this definition includes, but is not limited to, children classified as deaf-blind, multiply handicapped, autistic, cerebral palsied, neurologically impaired, brain-damaged, schizophrenic, and mentally retarded.

Other definitions for severely handicapped are listed in Table 1. Developed for differing classification and consequent treatment and funding purposes, these definitions differ from one another in focus. For example, the definition as proposed by the Bureau of Education for the Handicapped is based upon an exclusion principle, and is oriented toward educational placement of severely handicapped children and youth rather than describing what is meant by the term severely handicapped. Conversely, the definition of the Rehabilitation Act of 1973 views severely handicapped persons in terms of their employment potential. From yet another perspective, Sontag, Smith, and Sailor (1977) describe severely handicapped children from the perspective of how various deficits may impair functional skills.

Unfortunately, rather than clarifying our views, the myriad of definitions for severely handicapped persons has only served to cause

confusion on the part of service providers and funding agencies, thus posing barriers to serving this population. The barriers are two-fold. First, it is clear that the definitions presented do not adequately account for the vast individual differences within this population. Problems resulting from various severe handicapping conditions (e.g., visual impairments, mental retardation, etc.) are not additive in nature, but should actually be viewed as synergistic due to the dynamic interaction of the handicaps. This means that the severely handicapped individuals cannot be treated as a homogeneous group. Second, potential for diverse interactions among intrapersonal variables (see Figure 1) further contributes to heterogeneous groups within severely handicapped populations (Flathouse, 1982).

The implications of viewing severely handicapped individuals as a homogeneous group directly affects the provision of educational and supportive services. With continued funding cutbacks across the national, state and local levels, both direct and indirect program support for the disabled is becoming more difficult to secure and maintain. In essence, the possibility of groups of severely handicapped individuals with similar etiologies being denied funding may be forthcoming. In the event that this occurs, parents may be required to secure alternative educational and funding sources. The problem with this, however, is that organizations which provide services for the severely handicapped are also experiencing funding cutbacks. In a recent publication, Cherow, Matkin and Trybus (1985) list over 117 professional societies, associations, special interest organizations and agencies which provide services to handicapped individuals. As a result, parents, educators, professional service groups (e.g., ARC, TASH) and communities are forced to accept alternatives to services which are less than desirable, focusing their attentions instead on the maintenance of the current services.

Two additional barriers, which have historically been overlooked, and

which may affect appropriate service delivery to the severely handicapped are, (1) societal and individual cultural and ethnic groups views of handicaps, and (2) the distinction between rural, urban, and what we shall call large city differences. As a society, we have become more willing, and better able to deal with severely handicapped children. For example, various support groups have been established within several communities across the United States, which can provide assistance and guidelines to parents on managing their child's problems, e.g., Association for Children with Down Syndrome, Association for Retarded Citizens, Association for the Aid of Crippled Children, etc. Further, public and state legislation (e.g., PL 94-142, etc.) has resulted in increased educational services provided to severely handicapped children and youth. This does not imply, however, that total acceptance or support for handicapped children exists.

Differences in the cultural acceptance of handicapped individuals within our society may be pronounced, ranging from a willingness to eventually accept the disability and seek professional assistance, to denial and familial embarrassment. For example, economically disadvantaged persons may not be as willing, or feel that they are able to seek the advice or assistance of professionals. Another example of this phenomena are certain Asian populations, who are seemingly less accepting of their child's handicap, viewing it as a source of embarrassment, and consequently are not willing to seek professional assistance. Instead, they tend to keep the handicapped child "hidden" within the confines of their own home, choosing instead to provide for the child to the best of their abilities. Subsequently, professionals must be sensitive to cultural and parental perspectives of a severely handicapping conditions in the identification, assessment and ecological management of the severely handicapped child's communication program.

The distinction between rural, urban, and city differences, although seemingly trivial, is in fact an important consideration and major barrier in respect to opportunities for environmental stimulation, assessment, and service delivery systems. Within the urban settings, such as typical "small" cities or university towns, there appears to be ample opportunity for assessment, and even low-cost educational opportunities. Often found within these areas are educational opportunities or university supported educational and service facilities which contribute to the overall program quality of service provision for the handicapped persons and their families. Within large cities (e.g., Chicago, New York), parents may have difficulty choosing among the plethora of clinics providing services and at the same time experience difficulty in transportation to and from these clinics.

Rural residents are posed with different problems and/or opportunities than those encountered by urban dwellers. In rural and remote areas, the distance to clinical service centers may be extreme, both for assessment and educational or remedial services. Service delivery systems for rural populations are further hampered due to the low incidence of handicapped individuals residing within these areas. In these settings, it may not be considered "cost-effective" for the educational system to hire additional teaching and support staff. The burden may then fall upon the parents, who are forced to seek the best opportunities for their children, often times at their own expense. When rural school districts are able to secure professional services, an added burden may be placed on professionals who must travel to these rural settings. For example they be be unable to easily transport the necessary programs and assistive devices (e.g., computers, augmentative communication systems, etc.) to be used for stimulation, teaching, or intervention.

Although the federal guidelines have been been valuable in establishing

minimum requirements which must be met in the services delivered to severely handicapped children, they have not removed all of the barriers to service delivery. PL 94-142 mandates educational services to all handicapped children from three through twenty-one, however, states are neither required to provide services to infants and preschoolers, nor are ample federal or state funds available for such services.

Due to lack of funding legislation and funding cutbacks, early intervention programs have been difficult to implement inspite of their reported value. According to Appell (1982), early intervention is critical for the severely handicapped young child, as well as for the caregivers in order to prevent dysfunctional interactions and overwhelming deprivation. Waiting until severely handicapped children are three, however, may only serve to contribute to and increase feelings of incompetence for both the infant and the caregiver (Appell, 1982).

The concept and significance of early intervention has gained much attention and support over the years. Appell (1982) has argued that the rationale for early intervention programs for the severely impaired include:

1. An infant born biologically intact can develop to full genetic potential if his environment is normal.
2. An infant born biologically intact will demonstrate developmental attrition, that is, failure to achieve his genetic potential, if he is environmentally deprived.
3. An infant born with biological deficits, such as deafness, blindness, brain injury, or some combination thereof is at risk of developmental attrition equal to or greater than biological insult. The rational for intervention programs for such children is a belief that compensatory or alternative programs for such children may prevent or minimize the attrition.

Parents and educators must become more aware of advocacy groups which can not only direct them, but assist them in securing the most comprehensive and quality services for their severely handicapped children. Taken together, these conjoined forces may help to alleviate barriers to providing quality services for young severely handicapped children (see Figure 2).

Taken together, the change agent team can also become advocates for services for the severely handicapped child. Their influence upon the settings, systems, and living environments can bring about changes in the types of services provided by agencies. Furthermore, they can also influence changes in the policies which govern the provision of services.

Attempts to secure the most comprehensive service delivery systems across various communities, however, may never be overcome on the federal level. If however, the focus is generalized to the local and state levels, the problems may be more manageable. The major issue inherent in providing adequate services for severely handicapped children then becomes one of an integrated approach. While the number of professionals involved within the service delivery team can vary as can their respective involvements, this integrated approach would create rich opportunities, shared insights, and an ecological approach to communication management. One means of implementing this approach, which could effectively overcome this barrier, would be the creation of a comprehensive service delivery system, enacted by state laws, which would create a legal mandate for community services which would include aspects of: a) diagnosis, b) evaluation, c) management teams, d) personal care, e) day care, f) respite care for the handicapped child, g) parent and family education, h) vocational and rehabilitative training for independent work, i) family and individual counseling, j) protective and legal services, k) community based programming, l) transportation, and m) research and development for curriculum development and training.

From Identification to Ecological Assessment and Management

Given the number and variety of definitions used to describe severely handicapped children and youth, it is not surprising that confusion exists in the areas of identification and assessment of both the person needing the service, as well as the service delivery system itself. In order to secure

adequate financial programming support, parents and educators must be aware of and address three issues related to assessment before proceeding with intervention:

1. What criteria should be used in identifying children and youth with severe handicaps?
2. What criteria should be used in assessing the adequacy of programs for severely handicapped persons? and
3. How might educational assessment of severely handicapped children and youth differ from other assessments of children and youth needing special education programs?

Let us look at the issues of identification and assessment of severely handicapped children and youth.

Identification

Using the BEH definition as the theoretical framework for the following discussion, three characteristics of severely handicapped individuals may be defined as: (1) they must have a "severe" or "intense" handicap, (2) they need an educational program requiring greater resources than are normally provided by traditional programs, and (3) they need programs that focus on skills necessary for greater independent functioning and self-fulfillment. Identification and assessment batteries should therefore include:

1. methods of measurement of the individual's current level of functioning;
2. items that are sequential and in a logical hierarchy to provide entry level considerations in curriculum development;
3. a description of the testing conditions in which the person performed at an optimal level so that optimal learning environments may also be established; and,
4. an identification of criteria used for acceptable performance (Dollar & Brooks, 1980).

The BEH definition of severely handicapped however, fails to encompass several variables which we believe are important to an accurate description of the functional capacities of the severely handicapped individual. For example, there is no description of single versus multiple impairments, nor of the severity or residual abilities of the individual. No provision is made for other health factors which might affect the individuals behavior and

performance (e.g., diabetes, arthritis, etc.). Nor is age of onset taken into consideration. It therefore becomes important for the assessment team to be cognizant of how these variables might interact to influence the functional capabilities of the individual.

Assessment

Assessing the communication skills of severely handicapped children and youth is an extremely complex and difficult task. It requires the use of many methods and procedures to generate the individual data necessary to plan eventual communication teaching programs. Problems are compounded by the fact that as the severity of the handicapping condition increases, the number of available valid and reliable assessment tools decreases. Additionally, the assessment task is complicated by the low frequency response rate by severely handicapped students to stimuli, and their low level of attention and interest generally.

We will discuss some major barriers which confront us relative to communication skill assessment. One, relates to lack of appropriate assessment tools. Clinicians and teachers work with specific time constraints and large case loads, and therefore it is necessary to use those procedures which can provide us the maximum amount of information about the student's communication abilities in the most efficient manner. But doing quick assessments with severely handicapped persons, we all know is next to impossible, even if we had the tools with which to do the measurements.

A second barrier relates to the student's inability to use usual response modes during standardized tests due to physical and/or sensory problems. Modifications for assessment tools which have been developed for non-physically handicapped or sensory impaired persons (which require a response mode different from pointing with the hand, saying a word, or making an X in a box) are not only difficult if not impossible to find, but are also looked

upon by our educational systems as less than adequate to measure the true abilities of the person being evaluated. The clinician/teacher must use additional ingenuity in all cases to adapt assessment stimuli input for the sensory impaired student. An additional problem with modifying tests is that the modified mode (e.g., scanning, encoding) may place additional cognitive and/or motor demands on the student and thus underestimate the child's true abilities. Add sensory and motor problems to limited cognitive abilities and we have a DIFFICULT TO ASSESS STUDENT.

Because appropriate assessment tools for severely handicapped populations are meager, we believe our best and most valid strategies are in the realm of Ecological Assessment. The philosophy of Ecological Assessment is to base assessment and treatment on the individual strengths and weaknesses of the learner rather than on comparison to norms. Collecting communication skills data within the students living environment provides information regarding the functional communication needs of the learner. The data gathered in the natural environments provides assistance in planning intervention by determining optimal learning strategies and styles of students, along with those factors which may be most motivating and reinforcing.

To determine the optimal assessment procedures and tools, it is best to start with observation in the natural setting. In observing the student in his/her surroundings, one can begin to develop a notion about the type(s) of procedures which may be most appropriate to the functioning level, response mode and time constraints for assessing the severely handicapped individual. In Table 2 are listed some questions which may be used to guide the assessment team and will assist in determining the functional communication behaviors of the child.

From the early observations which are made of the children by the assessment team, some formal tasks and tests may be chosen to assess the

learner's functional strengths, weaknesses and environmental needs. DuBose, (1979b, 1979c), Garwood, (1982), and Simeonsson, Huntington, and Parse, (1980) have suggested a wide variety of assessment batteries to be used with severely handicapped individuals. Miller (1980) notes, however, that existing testing procedures may not always be adequate or appropriate for certain populations, especially the severely handicapped. There are basically three methods for obtaining the information we need about the communication functions of severely handicapped persons. Those are: (a) direct testing; (b) observations in naturalistic settings and (c), interviewing.

Direct testing methods generally tend to be either norm-referenced or criterion-referenced batteries. Norm-referenced tests attempt to identify a child's developmental level in relation to that of other children of the same age.

Although norm-referenced tests are valuable in helping to plan educational programs, they may create several barriers for the severely handicapped child. Amongst the barriers is the interpretation of the data obtained from these tests. Because they were not developed with the intent of being used with severely handicapped populations, the validity and interpretation of the results may be virtually impossible to interpret, or meaningless if they are interpretable.

Criterion-referenced tests, on the other hand are intended to identify the specific functional skills within the child's repertoire. Test items are usually based on a logical developmental sequence. Skills assessed on these scales are generally grouped across the domains of cognition, language, gross motor, fine motor, social, and self-help. While criterion-referenced tests clearly delineate the set of skills that must be acquired to master particular functional skills, they do not provide sufficient information to determine why a specific skill was not performed by the child.

An alternative to the barriers of most criterion referenced tools is the use of tests which include suggested teaching activities for items. An example of one such program is the Early Communication Skills Curriculum (Higgenbotham, Mathy-Laikko, Reichle, Lippert, & Yoder, 1984). The Early Communication Skills Curriculum is designed to facilitate the social and communicative skills of profoundly handicapped or severely developmentally delayed individual's functioning below 12 to 15 months developmentally. The curriculum "contains assessment and training procedures developed to improve those cognitive-social skills thought to underlie the initial expression of purposeful communication behavior and first words" (Higgenbotham et al., 1984, p. iv). This teach-test-teach paradigm allows for assessment not only of the individual's functional level, but also for periodic maintenance and generalization probes of skills.

McLean and Snyder-McLean (1978), and Wasson, Tynan and Gardiner (1982) have suggested several modifications of normed and criterion referenced standardized tests which can be used with severely handicapped children. McLean and Snyder-McLean (1978) argue for the use of modifications since the purpose of assessment is "to obtain the most representative picture possible of the child's current level of functioning" (p. 126). Such modifications include repeated and simplified instructions, additional cues such as gesturing or modeling, modifying the required mode of response, adaptation or changing of stimulus materials, and the reinforcement of correct answers. Although these modifications invalidate the typical scoring procedures and standard interpretations, the information obtained may be valuable in the determination of instructional strategies. These modifications, if used with an assessment battery which is developmentally based, may help identify subsequent programming which is logical and sequentially based for the attainment of higher level skills.

Interview scales may also be used as means of obtaining supplemental information about the child's functional skills. The primary advantage of using these scales is that they may be administered to several individuals who are familiar with the child (e.g., parents, primary care givers, teachers, etc.) providing a quick means of obtaining information that may not be easily observed or tapped by other assessments. The primary disadvantage of parental interview scales is that they may be affected by the way questions are asked. Parents, for example, might misinterpret the type of information requested. Parents may also be uncertain if the child exhibits the skills which the question is asking for. Furthermore, parents may be reluctant to admit that their child cannot perform behaviors common to most children their same age.

An example of an interview scale is the Wisconsin Behavior Rating Scale [WBRS] (Song, Jones, Lippert, Metzgen, Miller, & Borreca, 1980, Note 1). The WBRS is composed of 11 subscales, can be used with severely and multihandicapped children between the ages of birth through 3, and is considered to be unique for a number of reasons. First, the scale incorporates an educational model that perceives sensorimotor deficits as "characteristics of handicapped persons and focuses on the development of their abilities" (Song, Jones, Lippert, Metzgen, Miller, & Borreca, 1984). Furthermore, the scale provides alternative items for individuals who are deaf/blind, nonverbal, and cerebral palsied so that multihandicapped individuals are not penalized in the assessment process or in subsequent programming planning. Third, standardization of the WBRS scores were obtained from institutionalized and noninstituionalized individuals. Validity of the items on the WBRS have been measured with the Fairview and the Vineland. In summary, Song et al., (1984) conclude that the major advantages of the WBRS over existing scales include:

1. detailed scale content with a 3-point rating useful for reliable assessment and evaluation,

2. noncategorical nature with alternative items provided for multihandicapped persons, and
3. arrangement of items in the precise sequence of difficulty (p. 411).

In conclusion, we recommend that assessment begin with an Ecological Assessment of the child's level of functioning. From this, a combination of assessment batteries, including care giver interview scales, should be used to obtain the most comprehensive overview of the child's level of functional behavior.

Intrapersonal Barriers Affecting the Development of Functional Communication Skill

It has been has been suggested that language development depends on the convergence of cognitive, affective, and linguistic processes rather than being an ability which emerges independent of these factors (e.g., Bricker & Carlson, 1981; Miller, Chapman, Branston, & Reichle, 1980; Thoman, 1981). Moreover, language is considered, foremost, a tool for communication within some social context (Bruner, 1975).

Language deficits or disorders appear to be one of the major handicapping conditions associated with severely handicapped individuals. According to Ingalls (1978), a deficit in language skills is perhaps the single most important characteristic that distinguishes a mentally retarded person from a nonretarded person. Considering the importance of language in human interaction, it seems logical that the lack of communication skills may adversely affect other aspects of the individual's life.

The concept of learned helplessness can also be used to explain the difficulties experienced by severely handicapped individuals in language development. Fouts, Couch and O'Neil (1979) suggest that:

> "the inability to speak creates a tremendous loss of control over one's environment, producing a situation analogous to that of learned helplessness. Consequently, these children should be passive and indifferent with regard to communication behaviors, and this passivity should generalize to situations not involving communication. Furthermore, these children should demonstrate lower

overall motivation and greater emotionalism when compared to normal children" (p. 219).

Similarly, the severity of the individuals disability may limit the child's active physical exploration of the environment. According to Seligman (1975), this results in motivational, cognitive, and emotional disturbances, i.e., the motivation of the organism to initiate responses drastically decreases; the heightened negative emotional state undermines the ability to perceive a successful outcome to responding, and consequently further opportunities for learning are avoided. The impact on cognition may affect the child's ability to: (1) sense information (stimuli) from the environment (sensory information); (2) recognize information as something that has been experienced in some form previously, which requires selectivity as well as organization (perception); (3) store this information (memory); and (4) retrieve it for use in making decisions (Fabricius & Wellman, 1984; Flavell & Wellman, 1977).

During early infant interactions, "the consistency, timing, and quality of the caregivers responses create expectancies about control and competence" (Lewis & Brooks-Gunn, 1979, p. 7). Inconsistent or absent early caregiver interactions may contribute to what Siegel-Causey and Guess (1985) have described as iatrogenic retardation, which they consider as a form of learned helplessness. They suggest that these less than rich interactions and lower levels of expectation may contribute to the child's failure to achieve cognitive, psycholinguistic, and neuromotor milestones.

Any attempt to ameliorate learned helplessness and foster communication development must focus primarily upon the environment. Yoder (1980) suggests that we must provide experiences which facilitate cognitive and communicative behavior. Such experiences include social environments which provide touching, holding, hugging, physical contact, and communication with the infant; physical environments which provide visual and auditory stimuli which

the infant can control, and a variety of prospective interactant's with the severely handicapped child (for the sake of preventing parental and caregiver "burnout" as well as for the purpose of providing a variety of interactants intrapersonal stimulation for the child). This notion is based upon the research of Yarrow, Klein, Lomonaco and Morgan (1975), who suggest that early cognitive and communication development can be significantly related to the level of stimulation, intensity of expression of positive affect, active kinesthetic stimulation, and variety in the inanimate environment of the child.

As is illustrated within Figure 3 and Figure 4, the dynamic interaction of intrapersonal variables will affect not only the child's knowledge base, but also their ability to affect changes within the environment. Keogh and Reichle (1985) suggest severely handicapped children may be viewed as differing in their apparent propensity to learn, their degree of motor impairment which can influence their ability to produce voluntary discrete responses, and in their degree of participation. The greater the individual variation across these dimensions, the more likely children are to require some level of organized instruction before they are able to acquire an utilize a functional repertoire of communicative behaviors.

Prior to intervention, however, an evaluation of the individual's ecological needs and opportunities must be assessed (see Figure 5). The goal of this assessment is to foster the design of functional intervention, based on the objective for the severely handicapped child to initiate and successfully perform real-life activities (Brown, Branston, Hamre-Nietupski, Pumpion, Certo, & Gruenewald, 1979; Gruenewald, Schroeder & Yoder, 1982).

Communication Management with Young Severely Handicapped Children and Youth

Upon the identification of a handicapping condition, decisions of when and what type of intervention programs (if any at all) are warranted. The

basic goal of language intervention is to increase children's communication efficiency within the context of social interaction. Early intervention programs are frequently introduced for the young severely handicapped child, with their major emphasis attempting to foster the growth of behaviors intended to accelerate the rate of development, acquisitions of new behaviors, and an increased level of independent functioning. Another major emphasis of early intervention programs is to prevent the development of secondary handicaps.

Early intervention programs can serve two major purposes. First, they can provide indirect services to both the family and the child. Specifically, parents of handicapped children, who frequently need assistance and guidance in providing care for their handicapped child, may require emotional support and respite care. The provision of respite care, if available, can provide parents the opportunity to meet their own, and other familial needs. Furthermore, parents who may not have been readily prepared for their handicapped child, may know little about securing supportive services for their child. With early identification, professionals can advise parents of the types of services which may be available within the given community.

As depicted in Figure 2, this approach considers parents and professionals as advocates for services. Through support groups and professional agencies, parents and educators will not only secure the necessary educational and fundamental supportive funds for the handicapped child, but also bring about a community awareness. All too frequently, communities have been either unwilling or unable to provide services to severely handicapped children and youth. As mentioned previously this is often farming rural areas, where a severely handicapped child may be the only individual within the entire community, and perhaps even the school district to have a severe handicapping condition. What then is the solution to this

barrier?

As has already been mentioned, making certain that parents are aware of the various agencies and legal rights which both they and their child have can, perhaps, be viewed as the initial step. Just as important, however, is caregiver and family education. Parents and family members may know little about the procedures for providing appropriate care or fostering the development of their child through interaction strategies. All too frequently, parents and family members attempt to compensate for the child's handicap by attempting to anticipate the needs of the child, therefore, interfering with the development of intentional communication. As a result, severely handicapped children may acquire a degree of learned helplessness, becoming overly dependent on the environment to anticipate their desires, needs and emotions. Parent and family education may be most effective if intervention occurs early in the child's life.

The education of the family and community is intended to contribute to the establishment of responsive environments. The significance of a responsive environment may lie in severely handicapped children learning that their behaviors can affect the environment. Environmental interactions allow infants to gradually build a more sophisticated knowledge base of the world by selecting information and fitting it to their current structured organization or understanding of the environment and the world. Subsequently, this may encourage infants to interact even more with their environment, thus facilitating other learning.

For the young severely handicapped child, intervention may have its greatest impact at a very young age. The concepts of cause and effect, control over the environment, and differentiated behaviors which signal the caretaker that the child is in need or desires something may be reinforced and taught. Early stimulation programs, as a part of their hidden curriculum,

also have the advantage of helping to reinforce and educate the infant to the realization that there are other individuals with whom the infant can interact.

Secondly, intervention strategy,or curriculum approach chosen for the severely handicapped child also requires serious consideration. The philosophy of different approaches can vary significantly, and serves as the basis for the skills and goals of the content. A dichotomy which is helpful in reviewing curricula approaches is based on the following perspective: Should severely handicapped students be treated as slowly developing persons who can (or should) replicate the normal growth process, or should goals and objectives be constructed through analysis of the functional requirements of present and future environments? Historically, intervention programs have waited for either the attainment of either sensorimotor stage V or VI before the initiation of formal programs. The basis of this argument is derived from the perspective that early social interactions between infants and their primary caregivers have been suggested to provide a basis for the development of communication (Bruner, 1975). Furthermore, Bates (1976) suggests that before children can develop interpersonal communication skills, they must:

1. be aware that others around them are using a system of communication,
2. discover roles of precommunicative give and take,
3. discover shared symbols that may be used to indicate and demand,
4. discover shared symbols that indicate individual referents, and
5. learn the meanings for these symbols in isolation and later in strings.

Recent research (e.g., Keogh & Reichle, 1985; Reichle & Yoder, 1985) has suggested however, that for children not beyond sensorimotor stage V/VI, a preferred intervention effort is to structure a beginning communication strategy so as to embrace the fundamental need to attend to the severe cognitive and perceptual deficits of children while teaching a generalized and

immediately useful requesting skill. Specifically, this approach attempts to reinforce and expand upon the behaviors of the severely handicapped child or youth which are considered to be communicative in nature. The theory behind this approach is to facilitate the acquisition of the concept that the behaviors of the severely handicapped infant or youth can affect environmental changes.

Bricker and Carlson (1980) suggest that a broad-based approach to early language intervention with severely handicapped children is warranted. They suggest that such an approach should include attending to the development of social, affective and sensorimotor behaviors. Mahoney (1975) also supports this position, arguing that the context of language intervention needs to encompass all aspects of the child's social milieu: "The ethological approach would develop an intervention program based upon the principle that language evolves from the social interaction and nonverbal communication systems which exits between language-learning children and their primary language models" (p. 145). Other researchers have supported this notion by designing and advocating that a social-ecological approach to early language intervention be used (e.g., Halle, 1982; Higgenbotham, et al., 1984; Keogh & Reichle, 1985; McDonald, 1985; McLean & Snyder-McLean, 1978; Mahoney & Weller, 1980).

A social-ecological approach to language intervention is based upon one major assumption. The primary change agent is the individual who is most familiar with the child (e.g., parent or other primary caregiver). The role of the interventionist is to assist this individual in acquiring the necessary skills to become an effective change agent. The introduction and utilization of curricula approaches are intended to provide guidelines for the construction of communication rich environments which may be highly attractive and motivating to the child. Furthermore, the curricula approaches are designed to encourage the change agent to be responsive to the child

rather than anticipating the needs of the child or attempting to train and elicit specific responses from the child. Further support is given to this approach by Bricker & Carlson (1980) who suggest that:

> To limit the context of intervention to only professional staff defies logic from two perspectives. First, the primary caregiver, usually the mother, is the one individual with whom the infant spends the most time. If the mother remains ignorant of how to arrange the environment and respond to her child this greatly reduces the number of opportunities that could be used to foster the development of appropriate communicative behavior. Second, through bonding and attachment the primary caregiver is usually the infant's most salient social reinforcer. To ignore this relationship is to ignore a powerful reinforcer for building communicative skills (p. 42).

The instructional philosophy advocated by this approach is further imbedded within two perspectives. First, attempts to arrange the environment in a highly attractive manner is intended to captivate the child's attention and interest. Second, and perhaps more importantly, care givers may create environments which can be used within an evaluative framework (see Figure 6) to monitor the maintenance and generalization of the trained behaviors (Warren, 1985), and to continually reassess the needs of the child.

A major impediment to teaching functional communication skills in the classroom lies in the organizational and administrative constraints on what teachers must instruct and what they must do. Often a major emphasis in special education classrooms focuses upon the teaching of classification schemas, matching objects, sight-word recognition, sensorimotor exploration, toileting, alphanumeric recognition (and if possible, production), and the construction of syntactic and grammatical sentences. It is not surprising then, that this "instructional environment" only minimally contributes to socio-ecological communicative competence.

Instruction within natural environments has been discussed in various places by Brown et. al., (1978; 1979); Donnellan et.al., (1980); Gruenewald, Schroeder, and Yoder, (1982). The approach espoused and found effective for

severely handicapped adolescents and young adults, arranges the environment to teach students chronological age-appropriate functional skills in natural environments (see figure 7). We have used the non-mutually exclusive curricular domains shown on Figure 8 to both assess and teach functional communication skills to severely handicapped children and adults. It has been found by us to be useful in identifying functional communication behavior needed for everyday functioning within the various environments in which handicapped and non-handicapped persons live. Assessing a person's knowledge of communication across the various domains places the teacher and clinician in a position of establishing an "honest and appropriate communication need", not based on linguistic developmental norms, but on a set of behaviors for which the students indicate a need.

A primary focus of a program to establish functional communication skills within the natural environment is to answer questions related to how a student communicates and under what conditions communication can and does occur (see Table 2). We know that the communication behaviors and needs demonstrated by the severely handicapped person are varied and changing. Depending upon the severity of the cognitive, sensory and motor ability, the communication behaviors of severely handicapped individuals may range from no spoken language to speech which is highly unintelligible. Other severely handicapped individuals may possess adequate motor skills to use manual sign systems. Still other severely handicapped individuals may have need for an expressive system of graphic symbols on a communication board, book or chart.

Perhaps the most realistic, and necessary approach to teaching the severely handicapped infant or youth functional communication behavior can be drawn from the needs of the individual across several natural environments. This notion is based on the hypothesis that students can acquire communication behavior commensurate with, but not in excess of, their cognitive abilities.

Because of the pervasive nature of communication break downs with the severely handicapped person, and because of the ubiquitous nature of communication in daily living, it is necessary to deal with communication skill development within the context of the student's learning and living environment. That is why communication teaching must be discussed within the context of the natural environment. Establishing communicative competence is the goal for every student, regardless of how handicapped that person may be. One can not however, apply the rules of communicative discourse of the normal developing child to severely handicapped persons, and expect to reach the goal of "communicative competence" (see figure 9). On the other hand, if we treat communicative competence as a " relative behavior" rather than an "absolute", dependent upon the individual's potential for acquiring such, then most severely handicapped persons can succeed.

Is Technology a Barrier or a Solution?

Severely physically handicapped infants and toddlers are usually motorically limited in the amount of interaction that they can have with their environment. This may limit their learning, causing secondary handicaps and thus create an even more handicapped individual. Goldenberg (1979) raises the question as to the level of motor interaction necessary to obtain the sensorimotor experiences needed by severely motorically handicapped individuals for cognitive development.

Goldenberg suggests that active control over the environment may not be necessary, and that handicapped individuals may be able to receive feedback from their surroundings in some other form. As a means of acquiring this information, Goldenberg suggests that microcomputer technology provides the means to maximize children's ability to interact with their environment as well as providing a means to evaluate systematically the consistency and accuracy of those interactions.

The process of developing functional communication and effective interactions skills in severely handicapped children has been aided recently by the use of technology. The development of various alternative and augmentative communication systems has been successfully used with a number of severely handicapped individuals. Research in the area of nonelectronic and electronic communication aids has focused upon the development of assessment, prescription, and management strategies, and are reviewed else where (e.g., Musselwhite & St. Louis, 1982; Romski, 1984; Schiefelbusch, 1980).

Vanderheiden (1981) suggests that technology can also be used as an environmental control device. The premise of this approach is to facilitate the learning and acquisition of co-occurrences and the notion that the individual can control or bring about change in the environment.

As was previously mentioned, severely handicapped infants and children may be overly passive, and therefore considered to have acquired a degree of learned helplessness. As such, severely handicapped infants and youth are generally not aware of the fact that their behaviors can bring about environmental change and feedback. The significance of being aware that their behavior can bring about change is valuable in the acquisition of cognitive and communicative competence. We believe it is important that young severely handicapped infants and children acquire the competence or knowledge that they have the ability to detect and utilize co-occurrences. This competence, embedded in the changing concept of infants in general, has particular importance for developing process-oriented cognitive curriculums for handicapped infants. Brinker and Lewis (1982a) discuss three basic types of co-occurrences, consisting of (a) two events that occur together in the environment, (b) two events that occur together within the organism, or (c) an event in the organism that co-occures with an event in the environment. According to these authors, the success or failure in detecting and

remembering co-occurrences has important implications for subsequent development. The authors suggest that the successful detection and recall of co-occurrences has a positive effect upon motivational, affective, and cognitive structures.

The cognitive-developmental approach assumes that severely handicapped persons are capable of perceiving, interpreting, and evaluating contingencies in their respective environment. Recent efforts to investigate the phenomena of the handicapped infants ability to perceive environmental stimuli, changes within these stimuli, and their ability to control the presentation of these stimuli have been aided by the introduction of microcomputers. Although still in its infancy, this research has provided valuable insight, particularly within the realm of Piagetian stage development and the potential to train handicapped infants within and between these stages, suggesting that the early introduction of social and environmental contingency awareness can contribute to the development of communicative competency.

The development of a generalized expectancy to control the physical and social worlds is a potential problem for handicapped infants (Brinker & Lewis, 1982a, 1982b; Goldenberg, 1979). Various handicapping conditions can deprive an infant of contingency experiences through one of the following mechanisms:

1. medical involvement that decreases the opportunity for social interaction.
2. parental attitudes and feelings that may reduce the number of cooccurrence that the parents provide.
3. the limited response repertoire of handicapped infants that generally makes both social and object cooccurrence less likely.
4. the ability to detect and remember cooccurrence that may be limited for some handicapped children.
5. a complex process of infant-environment transactions that progressively reduces the frequency of social cooccurrence.

Of the three kinds of co-occurrences, the type that may not be affected as dramatically by handicapping conditions is that involving internal events. The handicapped infant may be forced to rely on internal co-occurrences to

consistently experience control over the environment. Field (1980), for example, found that developmentally-matched handicapped children differ from nonhandicapped children in that the former exhibited more behavior directed to self and less behavior directed to teachers and peers. Furthermore, within the handicapped population, chronologically older children who were developmentally matched to a younger handicapped population showed less behavior directed to others.

It has been suggested that the detection of co-occurrences is dependent upon the young child's sensory abilities (Brinker & Lewis, 1982a; Lewis & Goldberg, 1969). Specifically, Brinker and Lewis (1982a) suggest that the association of two events to be detected rests on some form of short-term memory. Another cognitive process they advocated by Brinker and Lewis (1982a) and Lewis and Goldberg (1969) as necessary for the detection of co-occurrences is the ability of the individual to maintain the information of co-occurrences over long periods of time. Lewis and Goldberg (1969) and McCormick and Noonana (1984) suggest that co-occurrences act on the individual in four ways. First, co-occurrences orient the child to attend to the environment. Second, they arouse the child and help to modulate its state. Third, the detection of coccurrences leads to a positive affective tone. Fourth, through the operation of memory, they become ailments for subsequent intentional actions and ultimately for the development of mental structure.

In order to (a) account for the causal nature of the responsiveness-attention relationship and (b) to investigate whether responsiveness other than of a social nature is effective, Brinker and Lewis (1982b) studied three handicapped infants. Subjects included a low birth weight premature infant whose chronological age was 3 months after correction for her prematurity, a 4-month-old female Down Syndrome infant, and a 6-month-old Down syndrome male child. Using an Apple IIe, the computer was programmed to cycle through a

series of consequences, depending upon the child.

For the children within this study, the microcomputer was programmed to cycle through three different consequences, switching after 2 minutes with each one if the criterion was met. The consequences for the infants included (a) a tape recording of the Sesame Street Theme song, (b) activation of a battery powered train, and (c) presentation of a black and white drawing of a child's face. Movement of a predetermined limb with sufficient force resulted in a 4-second presentation of one of these consequences. Changing from one consequence to another occurred when fewer than four limb movements per minute occurred.

Infants who received contingent stimulation rather than noncontingent stimulation were expected to differ in at least three ways: (a) they would learn to pull the string to elicit a contingent consequence, (b) they would be more alert and interested and therefore would stay longer in the experimental setting before becoming fussy, and (c) they would be happier as a consequence of the contingency between their behavior and the picture onset.

After brief periods of experimental intervention, these children learned to control consequences in their environment and to also systematically vary their behavior to explore specific contingencies. In Piagetian terms, they had developed procedures characteristic of secondary circular reactions.

The results of this study support the Lewis and Goldberg (1969) notion that contingent stimulation has cognitive, attentional, and motivational effects and supports the other findings relating contingent stimulation to IQ scores. While alert and cognitively advanced infants may elicit more environmental stimulation and responsiveness (Lewis & Rosenblum, 1974), these data also support the notion that contingent environments may facilitate the infants' cognitive development through its motivational, attentional, and affective features.

In a similar series of experiments, Behrmann and Lahm (1984) have been developing a systematic approach to teaching computerized environmental interactions. The initial phase of their research project examines the parameters (motor, language, and cognitive developmental levels) for using the microcomputer to establish cause-effect relationships. Eight levels of use, ranging from the establishment of a cause-effect relationship to the use of a menu-driven program for initiating environmental interactions with multiply handicapped children between the ages of 6 and 12 months were included.

Based on their research findings, it appears that infants and toddlers understood the cause-effect relationship between the computer screen and the control switch. It also appears that their response times were adequate and consistent. Of the five mildly handicapped children who participated in this study, two met the criterion of responding in 5 seconds or less, 80 percent of the time over three or four sessions. Two other children were close to that criterion but were showing a deterioration of response time. The fifth child, although never close to criterion, showed the same deterioration of response time. The researchers interpreted these results by hypothesizing that the five children apparently understood the task, while attributing the deterioration in performance to a loss of interest, with other aspects of the testing environment becoming more interesting to the child.

Subjectively, these studies suggest that lower functioning groups of handicapped children appear to understand the cause-effect relationship between the computer screen and their control switch, which is, at minimum, the prerequisite for using a computer system to control the environment functionally. These data indicate, however, that children may have difficulty reaching a criterion response time of five-seconds or less. It also appears that their response time can become adequate and consistent. The noted variance across handicapped infants in their ability to respond within set

criterion times raises questions about expected levels of performance and response times that are realistic for severely multihandicapped children. After looking at the two distinct groups of handicapped children discussed in these studies, however, it becomes evident that there exits a need for empirical investigations to answer the question of what is an appropriate response, and how might training facilitate the acquisition of consistent and accurate responding.

According to Dickson (1982) what was once conceived as a solutions to increasing communication skills within the classroom has in fact, created an additional barrier for teachers. Specifically, curricula which emphasizes communication skills often requires teachers to structure and organize children's activities. These additional time constraints place additional demands upon the teachers, and may result in the modifications of the curricula to accommodate the teachers limited time.

Dickson (1982) suggests that given the pressures on schools to achieve multiple objectives including social and communication skills, the creation of learning activities which offer rich opportunities for acquiring skills may be a viable solution to this problem. Dickson suggests that these activities may take the form of entire classroom activities, or learning centers deliberately structured for creating interaction between children.

Within these structured environments, Dickson (1985) proposed the development and use of computerized software which may facilitate academic learning and social interaction. Used in this way, the computer can create a powerful educational tool, creating challenging, stimulating environments in which to learn.

The computer, therefore, can be used across a variety of situations which could significantly contribute to the severely handicapped student's learning environments and strategies. Traditionally, the computer has been used in

education as a learning and instructional aid. The advantage of using the microcomputer in this manner is that it possess the potential to interact with the user. It is able to present a stimulus, accept a response, evaluate the response, present appropriate feedback and reinforcement, record responses, and then move to the next instructional segment. This type of computer use, however, is not particularly conducive to exploratory learning.

Geoffrion & Goldenberg (1981), Goldenberg (1979), and Weir (1981) have reported effective gains resulting from Logo programming with severely cerebral-palsied children. In these studies, children have demonstrated the ability to comprehend and express concepts which require spatial-environmental knowledge as well as planed patterns of movement through the environment. The value of these exploratory learning programs (i.e., LOGO) is that they reinforce the concept of control over the environment in a motivating game-like format.

Practical uses of the microcomputer which are conducive to exploratory learning are still, however, in their infancy. Research has indicated, for example, that computers equipped with voice synthesizers can successfully be used to increase the reading vocabularies of mentally retarded persons (e.g., Lally, 1981). In another study, ten 2- to 6-year-old deaf children demonstrated significant improvement in word recognition and identifications after working with a computer program for six weeks (Prinz, Nelson, & Stedt, 1982). Another line of research has investigated the effects of using a microcomputer equipped with a voice synthesizer on elementary school aged children's writing abilities. This research suggests that not only does writing become a motivating activity for children, but also that their quality of writing and editing improves, as well the development of audience awareness (e.g., Borgh, 1984).

Microcomputers have also been used in creating communication rich

environments. Brady and Dickson (1983) for example, demonstrated the value of the microcomputer by using a referential communication format with hearing-impaired and normal hearing children. In the context of this game, the hearing-impaired child was required to describe one of four figures to the hearing counterpart. Results of this study found that the microcomputer format successfully brought about sustained written communication about the complex figures between hearing-impaired and hearing students (Brady & Dickson, 1983).

Computers have also been used with nonhandicapped children as a stimulus for altering and enhancing the social-communicative patterns of the parent-child and sibling/peer-child dyads. Preliminary evidence has indicated that the microcomputer can be used with software to create environments in which the style of interactions is elicited by the task itself rather than through attempting to modify or control the parents verbalizations. Specifically, parents ask more open-ended questions with their nonhandicapped children following brief introduction to the software (e.g., Michlowski, 1984).

Similar findings have been reported with dyads of children using microcomputers. These studies suggest that the microcomputer can be used as a medium to increase prosocial behavior between dyads of nonhandicapped peers (e.g., Borgh & Dickson, in press; Swigger & Swigger, 1984), and in dyads of moderately handicapped-nonhandicapped peers (e.g., Dickson, Martin, & Villarruel, Note 2).

Several encouraging results from these studies should be mentioned. First, the types of verbal interactions had as a theme the management of turntaking. Borgh and Dickson (in press) and Dickson, Martin and Villarruel (Note 2) found that the need for adult or teacher intervention decreased over time. This finding is assumed to be related to the children's growing understanding of turntaking, as well as becoming more familiar with and less

inhibited with the microcomputer. The context created by the microcomputer also resulted in substantial amounts of supportive, cooperative interaction. Finally, several of the children who participated in these studies were noted to engage in self-mediated verbalizations, which according to Flavell and Wellman (1978), contribute to metacognitive development. In summary, Dickson and Borgh (in press) and Hawkins, Sheingold, Gearhart and Berger (1982) advocate that the social interactions that take place between children may be of great educational significance.

In summary then, the microcomputer may be used as a powerful learning tool and communication aid for severely handicapped children. As a communication aid, microcomputers can make a unique contribution to language intervention with severely handicapped children, facilitating individual participation in both oral and written language. Meyers (1984) has suggested the following types microcomputer-based intervention designed to promote the acquisition and development of language and literary skills:

1. A beginning communication device and language acquisition aid for severely physically handicapped toddlers.
2. An augmentative communication device and language development tool for toddlers with delayed speech.
3. A beginning reading and writing tool for handicapped preschoolers.
4. A communication device and language development tool for nonoral school-aged children.
5. A literacy development and remedial literacy tool for school-aged handicapped children.

The philosophy of microcomputer intervention with severely handicapped persons focuses upon normalizing the experiences of handicapped children rather than normalizing the behavior of these individuals. Unfortunately, longitudinal research and funds are necessary to further investigate the role of microcomputers as a habilitation tool with severely handicapped children.

WRAP UP

Developing communicative competence for most of us has been an easy and non thought giving process. To develop such competence for the severely

handicapped child and young person has for the most part been extremely difficult, if attained at all. The barriers which most severely handicapped persons face personally have to do with problems in cognition, sensory avenues and motor ability. Added to the personal concerns are environments which frequently are less than supportive. persons. These take on many different forms: from a parent who doesn't care to one who cares "too much"; from local education systems which provide a service, but of questionable quality, to LES's which leave no service unprovided and of the best quality; from state systems who provide minimal funds to those who provide amply (never too much). There are policy issues which continue to threaten service delivery at all levels, and funds appear never to be sufficient. The barriers of poor assessment tools, intervention strategies and too few professionals trained to provide communication skills to severely handicapped, all add up to bring even the strongest among us to feel defeated.

There is hope. The changes which have come about in the past 15 years for the support of severely handicapped can be measured in many ways. Policy changes at the Federal level have assisted. Development of curricular materials and the education of personnel to serve severely handicapped persons is on the increase. New strategies for intervention, assessment and advocacy have been encouraging. Technology continués to bring new focus on what can be accomplished for the welfare of severely handicapped persons. While we can become discouraged by the barriers and hopeful with some of our solutions, one must also be continually pushing for MORE.

The future relative to providing the services necessary for developing communicative competence with severely handicapped persons lies not with any one agency, professional group of persons, parents or paid advocates. The provision of the necessary service lies in the collective efforts of all

agencies, policy makers, educators, institutions, parents and the like. We must not only continue to seek out the service barriers and attempt to resolve them but we must also be visionary and futuristic in our approach. While technology may be one of our more current and useful resources for providing communication strategies for the severely handicapped, let us not be seduced into believing it is going to answer all of our problems. We have yet to take one very large and aggressive step to assisting in the services needed, and that we believe, is to MARKET the needs of the severely handicapped child and youth. We believe it would be a worthwhile attempt for this symposium to explore how we might market the needs of the severely handicapped at the local, the state and regional level. With good marketing efforts, we believe there would eventually be an awareness of what the severely handicapped person may need of us, and also how the severely handicapped person can become more a part of the community from which we have too frequently excluded them. By providing the severely handicapped person a communication system we will eventually allow them to "speak" for themselves, and what could be a stronger advertisement for the service that we will have provided than that?

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Table 1. Definitions of severely handicapped.

Organization	Definition
P.L. 94-142 U.S. Dept. of Health Education, and Welfare, Bureau for Education of the Handicapped, Office of Education (1975)	Multihandicapped means concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc, the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind children.
Rehabilitative Services Administration (1973)	...(The severe disability) that physical or mental impairment which seriously limits the functional capabilites (mobility, communication, self-care, self-direction, work tolerance, work skills) of a handicapped individual to the extent that the person is unable, to a substantial degree, to cope with the physical, or mental demands of gainful employment and whose rehabilitation normally requires multiple services (restorative, compensatory training, selective placement) over an extended period of time.
Southeastern Regional Coalition (SERC) (1979) [in Fewell & Cone, 1983]	The severely handicapped individual is defined for educational purposes as 1) having serious primary disabilities that are cognitive (e.g., -4 standard deviations below a normal IQ on a standardized test of intelligence such as the Revised Stanford-Binet Test of Intelligence) and/or behavioral (e.g., Autistic or childhood schizophrenic), 2) having the high probability of additional physical and/or sensory handicaps, and 3) requiring significantly more resources than are provided for the mild and moderately handicapped in special education programs (p. 39).
Wisconsin Administrative Code	Severe mental retardation is determined by an individual with scores -4 to -5 standard deviations below the mean on a measured intelligence scale. A multiple handicapped child is one who has 2 or more handicapping conditions leading to an EEN which may require programming considerations and are determined by an M-team composed of specialists trained, certified and experienced in the teaching of children with the EEN.

Sontag, Smith, and Sailor (1977)	"...children who are divergent in degree, not in kind...They form an extremely hetergeneous group, comprising not only the organically impaired, but also those whose serious emotional distrubaces, deafness, blindness, or severe orthopedic impairments render them fuctionally retarded. When we speak of the severely/profoundly handicapped, we are referring not simply to the severely mentally retarded, but to a population of multihandicapped persons, including the severely emotionally disturbed, the severely health-impaired, and so on (p. 5).

Table 2. Some basic considerations in evaluating the functional communication needs of severely handicapped children and youth:

1. Does the child exhibit the desire to communicate?
   Indicate behavior (how) desire is demonstrated.

2. Is there opportunity to communicate and interact with others?
   Discuss with whom and in what way this takes place.

3. Are the child's communication attempts recognized and acted upon by others in the environment?
   Show how this is done and what reciprocal behavior the child may engage in when there is a succesful communication interaction.

4. What are the modes the child uses to communicate?
   Has the child been taught to communicate or express his wants/needs in this manner, or has it come about spontaneously (self taught)?

5. What potential modes for communication are available to the child which may improve functional communication?
   Eye gaze; gestures; sign systme; picture book, etc.

6. List the communication functions which the child currently uses.
   e.g., Requests; intentions.

7. What is the prognosis for oral communication?
   See Shane and Bashir (1980)

8. Who serves as the primary message receiver?
   Parent; caregiver

9. How do the physcial and social environments in which the child will primarily use the communication system, affect the system chosen for use.
   Is the system primarily for school; work; home, etc.

10. What are the educational and vocational goals for the child?
    How the family considered special programming relative to vocational/work potential.

Table 3. Barriers of using norm-referenced and criterion-referenced assessments with severely handicapped individuals (Adapted from Rowland, 1985).

Barriers of using Norm-referenced Assessments.	Explanation
Age Appropriateness	1. Materials that are appropriate for infants and young children are generally not appropriate for older, severely handicapped individuals. The lack of age appropriate stimuli may make testing situations unmotivating. 2. Test items developed infants assume an infantile level of motoric functioning. Many items found in cognitive or communicative subscales that are appropriate for preambulatory infants become singularly inappropriate when administered to an ambulatory child or a large, physically robust person.
Adaptations	1. Adaptations defeat the purpose of the norm-referenced test, which is intended to compare the performance of individuals under very carefully, documented conditions.
Lack of Sensitivity	1. The number of items per subscale are generally few, providing insufficient sensitivity to distinguish between children who develop relatively slowly. Furthermore, these subscales are not likely to provide the indepth information required by the professional team interested in one domain of the child's development to construct specific interventions.
Confounding of Skill Areas	1. Many norm-referenced tests are confound by items between subscales, i.e., items from any given subscale are likely to tap skills from other developmental areas.
Corrections for Prematurity	1. Use of a corrected age may minimize discrepancies between the subject and CA Cohorts, preventing the unnecessary labeling of the infant as developmentally disabled. Correction for gestational age, however, implies that biological factors are the predominant influences on behavior in the early months of live. Conversely, basing scores on an infant's chronological age implies that maturational or environmental factors are the predominant influences on behavior during this period of

Table 3 (cont.)

Barriers of using Criterion-referenced Assessments.	Explanation
Procedural weaknesses	1. Many criterion-referenced tests consist of a checklist of pertinent behaviors which exist or don't exist. Test stimuli and the range of acceptable responses are seldom specified and procedures may not be provided for testing those items which do not occur spontaneously.
Lack of Reliability and Validity Data	
Lack of Scoring Standards	1. Some assessments provide only for visual profiles, others provide no method of deriving a score from test performance.
Ordinality and Educational Implications	1. When items from different tests are arranged according to the sequence of acquisition observed in the development of nondisabled children, their ordinality becomes highly questionable. 2. Issues of ordinality becomes problematic when assessment data are tied closely to instructional consequences. If a child fails an item on a criterion-referenced test, that item may be assumed to constitute an appropriate instructional objective. If the item does not represent either a functional and age-appropriate behavior in and of itself or a demonstrated prerequisite to other functional behaviors, such a conclusion is not warranted.

NOTES

1. The revised version of the WBRS will have norms for each of the subpopulations, residing within the community and within residential settings. Furthermore, the alternative items for severely handicapped children and youth (e.g., deaf-blind) will be incorporated within the scale, rather than as seperate sections.

2. Dickson, W. P., Martin, C. A., & Villarruel, F. (1985). Using a microcomputer to create social interactions among handicapped and non-handicapped children in a mainstreamed preschool. (Working paper).

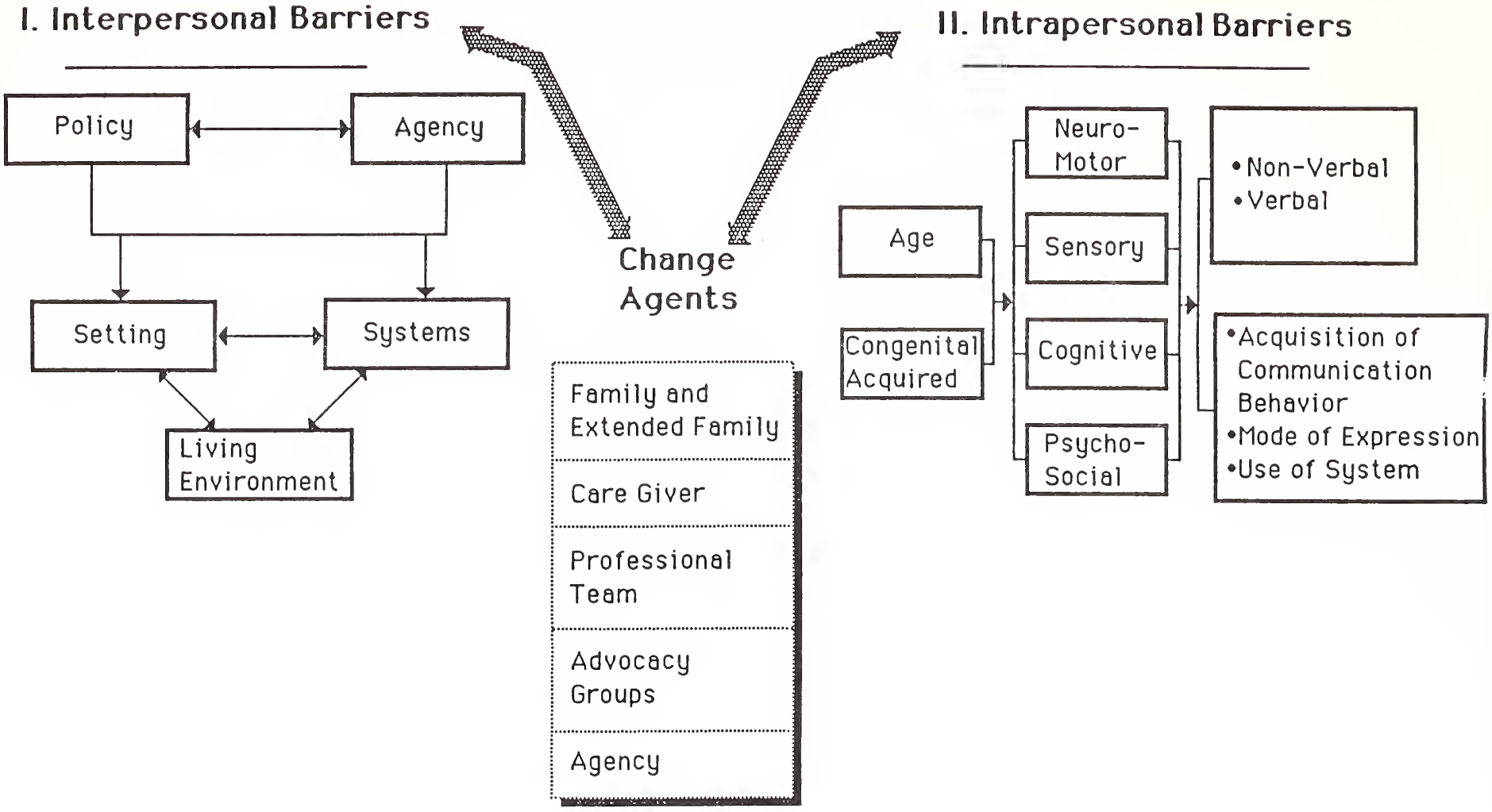

Figure 1. Service delivery barriers affecting the development of functional communicative competence

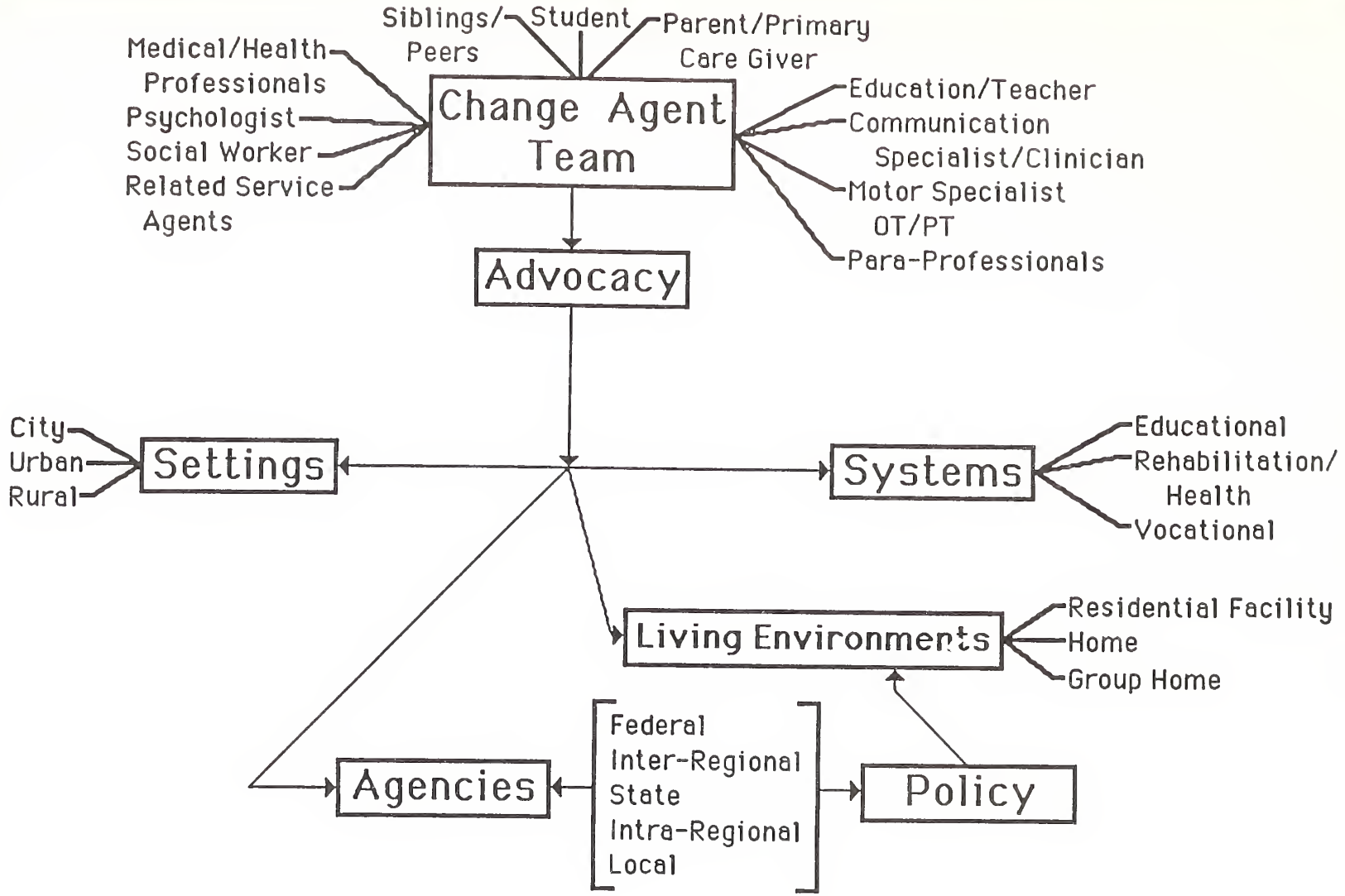

Figure 2. Ecological management: An interpersonal service delivery approach

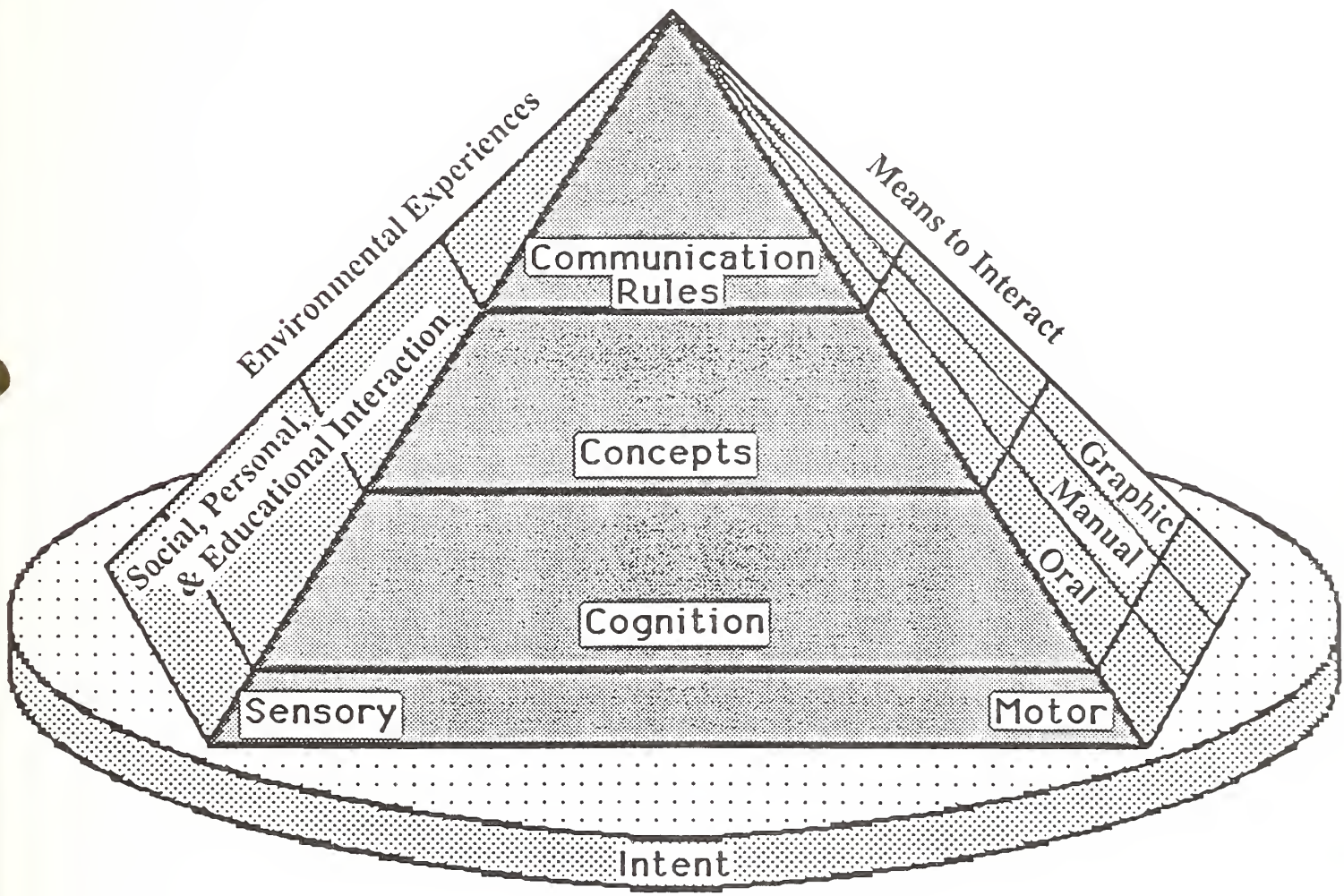

Figure 3. Requisites for communicative competence

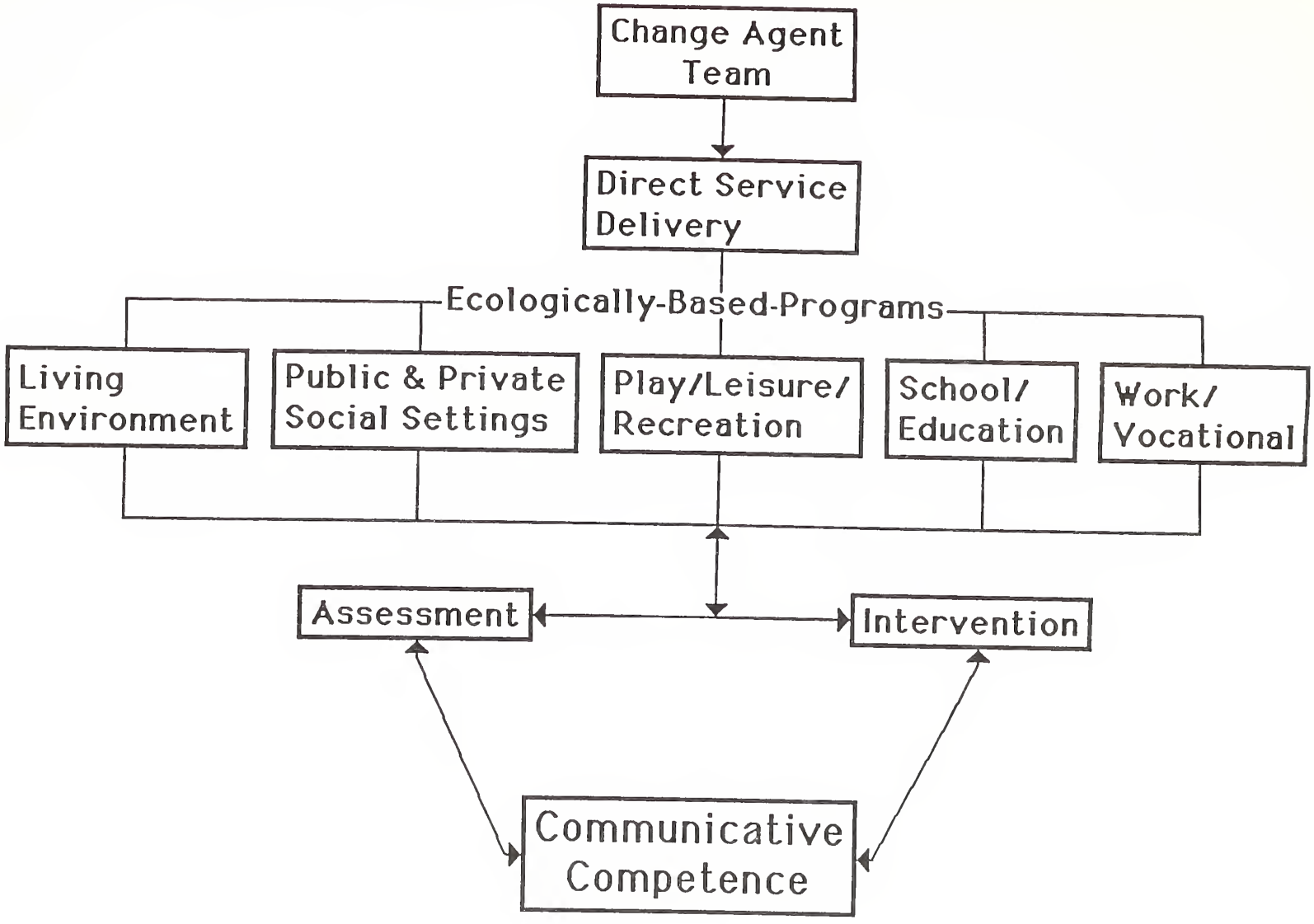

Figure 4. Community based programming: An interpersonal delivery approach

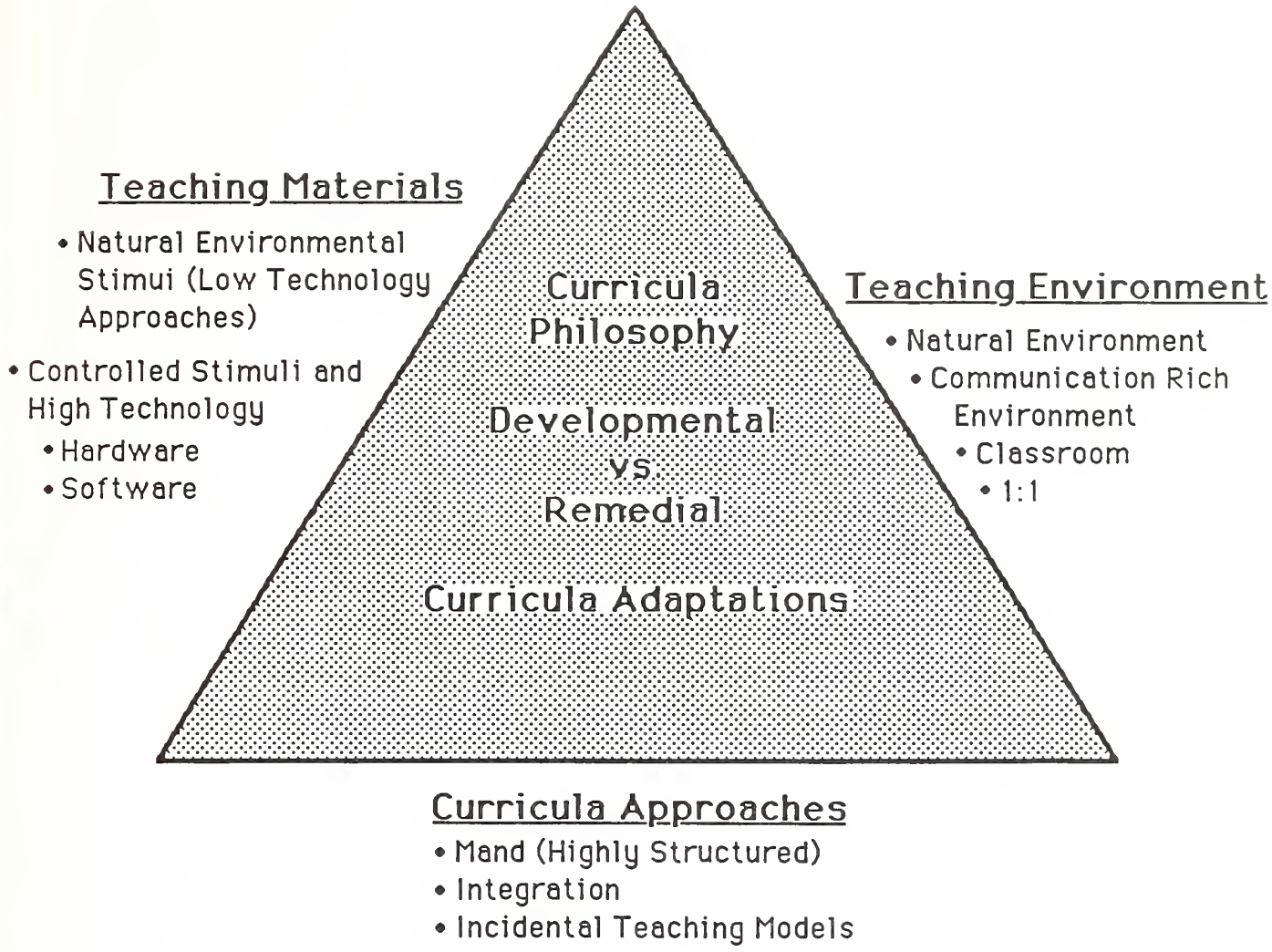

Figure 5. Management approaches used in the development of functional communication competence

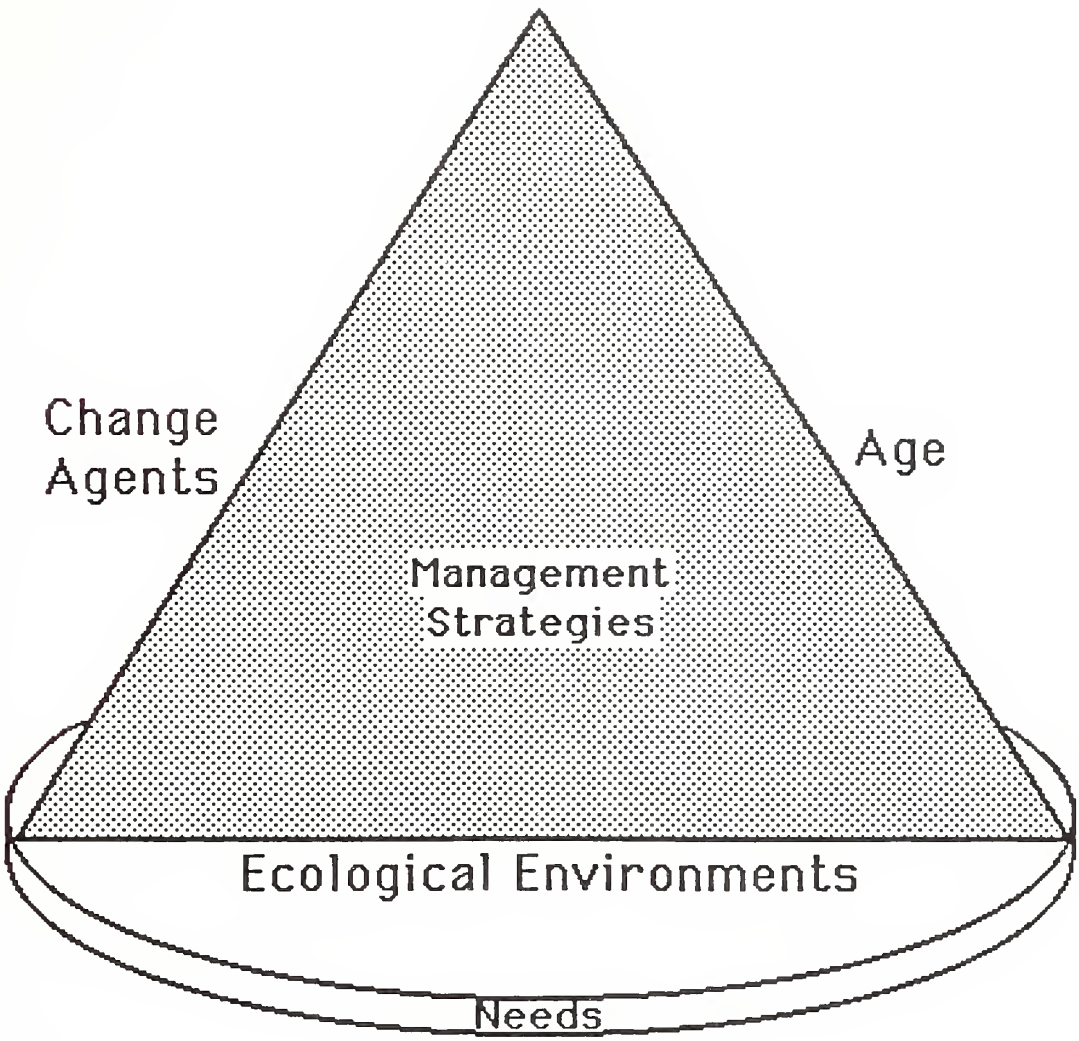

Figure 6. Evaluation of management programs

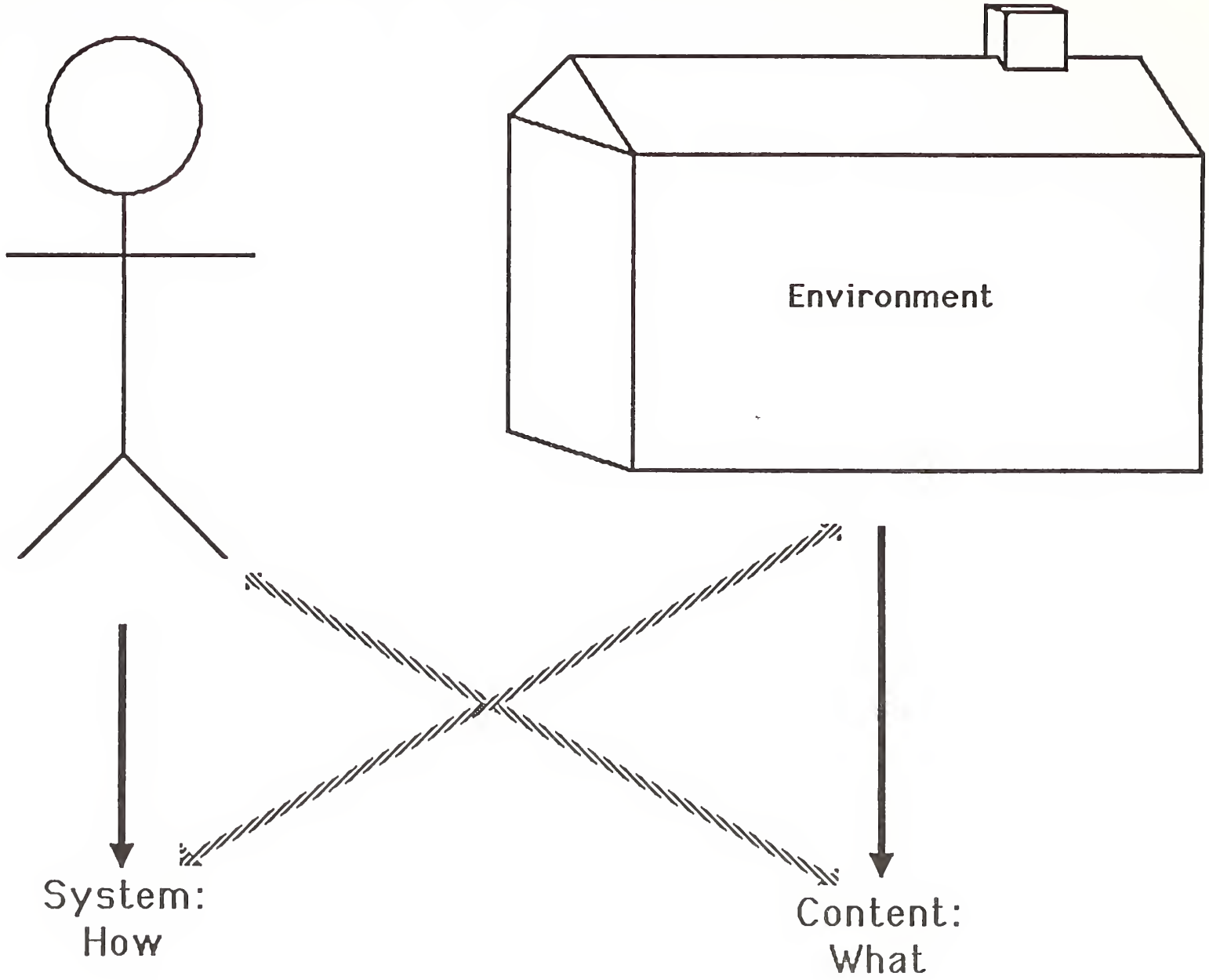

Figure 7. An environmental model to determine the content for functional communication development

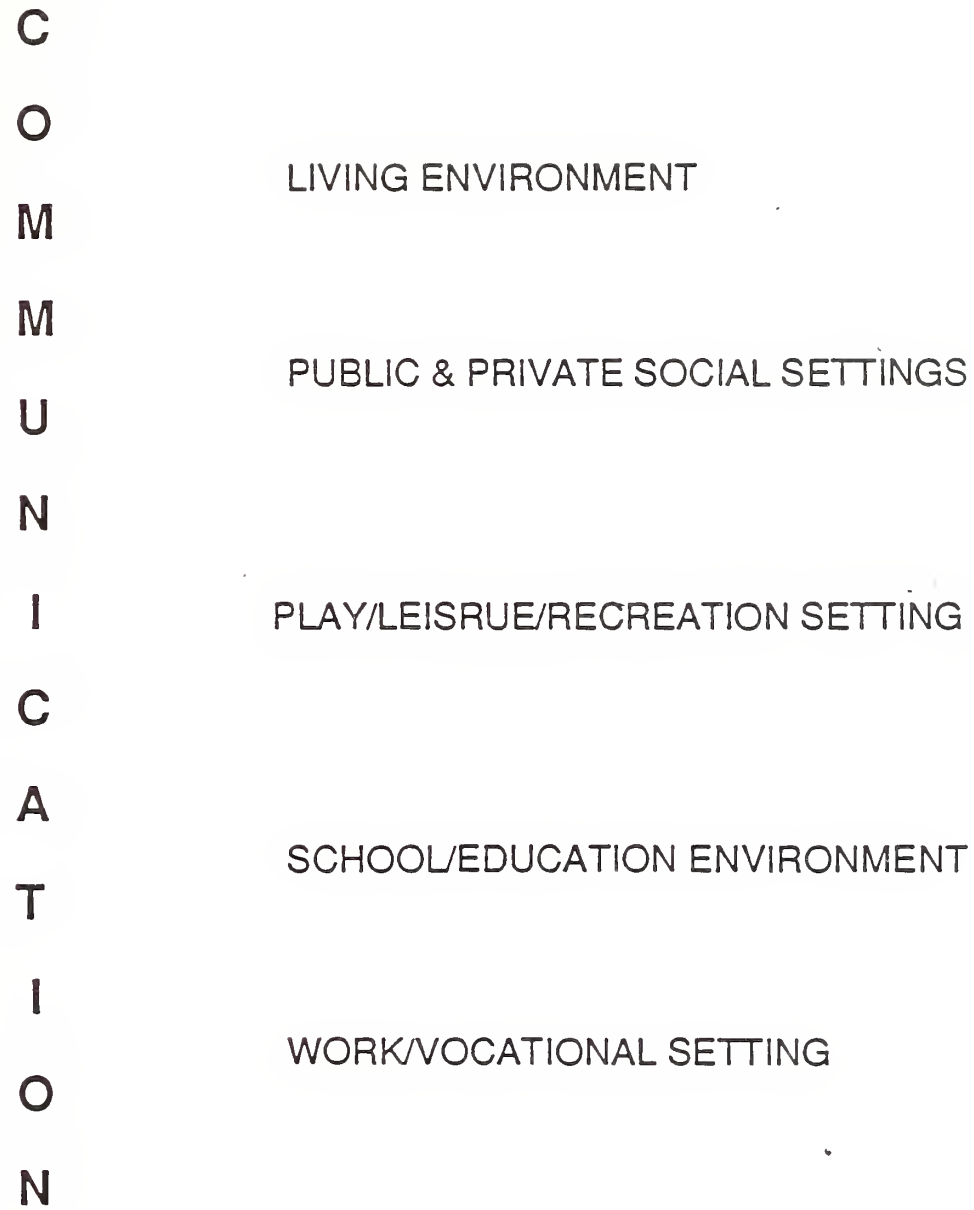

Figure 8. Five non-mutually exclusive natural environmental domians

Communicative Competence

KNOWLEDGE OF:

"When to speak (communicate)*

When not, and

As to what to talk (communicate)* about

With whom

Where, and

In what manner."

-Hymes (1972a, 1972b)

** modifications by Yoder (1985)*

Figure 9. Defining communicative competence (Adapted from Hymes, 1972a, 1972b).

REACTIONS TO YODER AND VILLARRUEL PAPER

by

Patricia A. Ellis

In their paper, Yoder and Villarruel discuss the marketing of the severely handicapped students' needs and potential. There are assumptions underlying this marketing, some of which are: we want to improve the communication services for severely handicapped children and youth; through improved services, severely handicapped children and youth will communicate more effectively; we can agree on the elements which will improve these services; parents, caregivers, and professionals have or can learn the skills and attitudes necessary to improve services; other agencies and disciplines will agree to work with education and will agree to the priorities set forth by education's communication experts.

In the work-a-day world there are challenges to these assumptions: are communication services for severely handicapped children and youth worth the effort? Isn't "learned helplessness" of a severely handicapped youngster easier to cope with than expending the energy to develop a more independent person? Where are the longitudinal data to prove that higher functioning by a child or youth is directly related to the type of services provided? Did these interventions help or is there some magic or voodoo that brings about change? Can professionals bridge the gap between behavioral - developmental points of view? Does inservice, technical assistance make a difference? How do you bring about changes in higher education,

make an impact on preservice providers? Will State and local agencies ever play together nicely?

There are positive examples that the challenges are being answered for the benefit of severely handicapped children. For example, there has been an upsurge of parent/professional partnerships which has provided working relationships dedicated to serving severely handicapped children and youth in our public schools. This is a powerful coalition and helps bridge the gap between what we wish to accomplish and what we are doing daily to bring appropriate services to severely handicapped youngsters.

There is an increased emphasis on applied research, especially in "following along" with a child rather than following up on a child. This should provide us with important data concerning interventions, learning styles, growth cycles. There is continued need to look at the difference between what "follow up" and "follow along" research designs are giving us.

At the local level there is a continued need to bring research findings to the persons directly involved with the child's every day life. There is the continued need to share what is going well in various local settings. A good, practical dissemination program which would help individual teachers, parents, administrators is needed to extend the good work which is in existence. Various examples of projects to be disseminated include the programs emphasizing augmentative communication; intervenor preparation and activities; how to use regionalized service and the roles of these regionalized services.

The Oregon Training Institutions have developed a network among

teachers which is providing linkages among teachers and universities.

Coordinating councils which include agencies and parties with a stake in the outcome of programs for severely handicapped children and youth are slowly making headway through out the country. In each State these councils take on a different profile and each takes a different approach, a different dipolmacy to keep it in operation. Policies can and will be influenced by such councils.

Across the country, the challenges mentioned earlier are being confronted. At this moment, however, perhaps what the children and youth with severe handicaps are saying to us is, "This is all fine, but what are you going to do about it."

REACTIONS TO YODER AND VILLARRUEL PAPER

by

John Mick Moore

I. COMPUTERS/HIGH TECHNOLOGY

It is obvious that computers and high technological equipment have tremendous potential. However, it is crucial that we do not lose sight of what severely handicapped children and youth need prior to the introduction of computer application. One key element is the understanding of the concept of the environmental controlling potential of language. It must be determined that the computer application is being utilized in an appropriate manner.

We must be sure not to abuse the potential of computer application by allowing the computer to do too much (i.e., a leisure time activity where human touch and human need are drastically reduced). I can clearly think of a ward attendant who would place a residential severely handicapped child in front of a computer and spend the rest of the day away from that child while assuming the child's needs were being met.

II. DATA

It was interesting to note that the computer-related information presented in Dave Yoder's talk, while having great potential, was based on nonseverely handicapped children. This raises an important issue that we must have data to support our needs and to expand services. Data are necessary to validate approaches and promote guidelines. We will never procure adequate support without data to substantiate the needs of severely handicapped children and youth. There are limited

dollars. We need to demonstrate treatment efficacy. That is to say, we need to know which children to serve, when and how much. Data must be used to give us the support to move forward.

III. NEED FOR EMOTIONAL/TECHNICAL STAFF SUPPORT

We must not lose sight that those who can teach communication competence effectively are few! We need to conserve that resource through the use of inservice and workshop experiences which are ongoing. The inservice and workshop experiences should focus on the emotional as well as the technical needs of persons who work with severely handicapped children and youth.

IV. ATTITUDES

It may be that the biggest barrier facing the development of services for severely handicapped children begins with the changing of our own attitudes and the attitudes of others. Professionals often have designs on what severely handicapped children should be. We try to fit them into preconceived molds. If we expect them to fail, they will fail. If we expect them to succeed, they will succeed.

We must not lose sight of the concept of scriptwriting. We, as professionals, often write the script for a child's life by labeling the child and placing the child into a stereotypical category. Many of these scripts need to be rewritten and can be rewritten only if we change our attitudes and open our minds for new potentials and new gains for severely handicapped children and youth.

Don't let our limitations restrict the potential for developing communication competence with severely handicapped children and youth. We are a powerful influence in terms of scriptwriting. Let's start today by projecting a positive attitude that will break

down existing barriers and open new doors for the development of communication competence and delivery systems for severely handicapped children and youth.

REACTIONS TO YODER AND VILLARRUEL PAPER

by

Barry M. Prizant

The paper "Toward a System for Developing Communicative Competence for Severely Handicapped Children and Youth" presented by David Yoder and Francisco Villarruel touched upon four issues requiring further discussion. Based upon my consulting experiences to programs for severely handicapped individuals, I find these issues to be central to effective communication enhancement.

I. Within and across handicapping conditions individual differences is the rule rather than the exception.

Dimensions of individual differences may include a) learning or cognitive style, b) individuals who are active versus passive communicators, c) individuals who are emotionally well-adjusted versus individuals who develop emotional problems secondary to their primary disabilities, and d) differences in life experiences and communicative needs.

Blanket programmed approaches too often do not consider these differences, yet they remain prevalent. The ineffectiveness of packaged approaches must be recognized when evaluated within the criterion of functional communication ability. For professionals who have come to rely on such approaches for communication training, a shift of orientation is necessary. For future professionals, recognition of individual differences and incorporation of this knowledge into program planning is an essential part of their training. Future research needs to consider how such individual differences may bear on communication assessment and programming.

II. Our past and some of our present efforts at communication programming have resulted in "learning helplessness."

Too often professionals blame parents or primary caregivers for "learned helplessness" because they may anticipate and provide for their child's needs with minimal demands for communication. However, well-intentioned efforts by professionals may contribute to learned helplessness to an even greater extent. Common detrimental practices include:

a) Compliance and respondent training:-Some degree of "behavioral control" is necessary for conceptual growth and acquisition of communicative knowledge, but at what point does this result in passivity and lack of initiation. What is the long term cost of an "easily managed" or well-behaved student if the ability to initiate communicative interactions and to express basic needs is discouraged.

b) Cue-dependent or situation-specific learning:-Too often communication programming efforts and evaluation of such efforts occur in highly limited contexts resulting in the learning of limited functional communication ability. Inherent in communicative growth is the ability to use such knowledge across environments and to initiate communicative efforts. Environments that offer both opportunities and needs to communicate must be provided so that natural cues lead to an individual's desire to communicate and interact rather than artificial prompts or cues.

c) Developmentally inappropriate expectations:-Given that the development of speech is an unrealistic immediate goal for many individuals with severe handicaps, it must be recognized that

communicative intent can be expressed through a wide variety of presymbolic means including but not limited to gestures, picture boards, object boards, gaze, etc. Demands for developmentally inappropriate communication (e.g., use of a symbol system for a presymbolic individual) may result in frustration for all involved, and may actually result in communication breakdowns rather than enhance communicative competence. Furthermore, those interacting with individuals must be able to adjust their language and interactive style to facilitate mutually satisfying communicative and social interactions.

III. Communication enhancement is one dimension of enhancing social relatedness and emotional well-being.

With too narrow a focus on "skills" acquisition, we are in danger of overlooking social and emotional growth. Educational efforts also need to foster a sense of motivation and desire to engage others in social interaction, to express emotions and understand others' emotional states, and to develop helping and friendship relationships with peers. Many programs focus on instrumental communicative behavior to the exclusion of more socially oriented communicative behavior. Yet the latter is typically absent or extremely limited in the developing communicative knowledge of many individuals with severe handicaps. While instrumental communicative behavior (e.g., requests, demands, protests) is effective in"getting things done," socially motivated communication enhances one's membership in a social culture.

There is a need to develop a vocabulary to aid in heightening our awareness of the importance of social relatedness, and to formulate

and set specific goals as part of educational and communication enhancement efforts.

IV. There is a need to return to the proverbial "whole child" in communication assessment and programming efforts. We can no longer separate behavioral issues from communication issues. Individuals with severe handicaps often develop unconventional and socially inappropriate means to communicate and control environmental events in lieu of more conventional and acceptable ways to communicate intent and express emotions. Many past and present efforts have dismissed such behavior as deviant and advocate behavior management approaches without recognizing the communicative value of the behavior for the individual involved. Communication assessment and programming must acknowledge that much "deviant" and "aberrant" behavior is functional, and must strive to help individuals with severe handicaps to develop more conventional and socially appropriate means to express intent. The dichotomy between behavior management and communication enhancement must be buried. The focus must shift to enhancing ability and competence rather than eliminating deficits.

These issues are not new. The problem is we have paid lip-service to them and have not incorporated them into our knowledge, practices, and training of future professionals. All of these notions were discussed implicitly or explicitly in the Yoder and Villarruel paper, yet we need to remain sensitized to them.

IDENTIFYING THE ROLES OF MULTIDISCIPLINARY PROFESSIONALS IN PROVIDING AND EVALUATING COMMUNICATION AND AUDIOLOGICAL SERVICES TO CHILDREN WHO ARE SEVERELY HANDICAPPED

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The title of this section of the conference and the topic sections within it signal some important assumptions that we must keep clearly in the forefront of our deliberations in this working conference. The first is that the title makes it evident that it is already a given that the provision of quality communication services to children with severe handicaps requires a carefully orchestrated collaboration of the efforts of professionals from several disciplines. Clearly, the model of the speech-language pathologist as the sole purveyor of communication treatment for such children is long gone and we are well rid of it. The **Objectives** included in this section of the conference signal some additional assumptions that underlie our deliberations here. These additional assumptions reflect an awareness that there are three elements of the service chain which have particular instrumentality in effecting the successful operationalization of a multidisciplinary effort in this important service domain. Specifically, these three elements are: 1) the substantive knowledge base available to professionals and consumers; 2) the service delivery system in which these professionals operationalize their knowledge and skills; and 3) the evaluation system utilized to track the effects of such services. There is one further assumption that is implicit in the agenda and in the very fact of this working conference. That is simply, that the three elements listed above are currently problematic and that specific efforts are needed to establish the processes that will bring each element to a point where it will function to assure that quality services are available to children suffering the effects of severely handicapping conditions.

We shall discuss each of the three crucial elements more specifically and, then, we shall discuss some of the means that we might consider in our

efforts to actualize the processes required to assure that these elements are in place, and are appropriately facilitative of the quality of services required.

ASSURING THE KNOWLEDGE BASE: TRAINING AND CONSULTATIVE SERVICES

First, it is a given that there is a knowledge base that is crucial to the provision of quality services, and that this knowledge base must be in place among professionals at the service level. Dr. Yoder's excellent presentation has sensitized us to the needed depth and breadth of that knowledge base. If it is also realized that this is a knowledge base that is in a state of constant change - it becomes clear that the processes needed to assure such knowledge need to be open-ended for both the infusion of new knowledge and the resultant revision of older concepts. When we add the fact that our efforts to provide quality communication training to children who suffer severe handicaps require multi-disciplinary professional teams, we further realize that this knowledge base must be made available within the boundaries of many professional disciplines. Even further, if we are to be successful in attaining complementary and coordinated multi-disciplinary efforts, the many professionals involved must not only share a common body of knowledge, they must share a **common language** by which to discuss this knowledge. All of these needs signal the need for a process that is quite beyond any simple model of pre-service training isolated in many different professional disciplines. Pre-service tracks in the many disciplines involved will not meet the needs implied by the terms a **common body of knowledge** or a **common language for discussing this knowledge**. Neither will a preservice model meet the problems that are created by the fact of a knowledge base that is constantly growing and changing or of a large body of professionals on-line in service settings who can only attain this knowledge base through inservice training. All of these needs tell us that a comprehensive **continuum of activities** directed toward the establishment and maintenance of an adequate knowledge base must be a generic element of the processes needed to attain our goals of quality services to children with severe handicaps.

This need for a continuum of activities in the transmission of knowledge sets up the need for both a revision and a significant supplementation of our standard preservice training models and requires that substantive training in pre-service programs in colleges and university programs begin to include more attention to the need for the multi-disciplinary approach, and that education and training in this domain must become further extended into inservice years through additional training activities carried-forth by state departments of education; professional associations; and technical assistance programs. All of us know that this need is already well-recognized and that this process has begun to be realized through activities by certain representatives of these various training entities. We know, however, that current activities are uneven and uncoordinated and, thus, are inadequate.

All of this means that the process directed at the transmission of knowledge in this overall domain must be strengthened at all levels; must contain mechanisms to increase the coordination of such efforts; and must be carried out in a non-standard delivery system which extends beyond the university level to the state and local levels. From the experience I have had over the past twenty years, I would also suggest that such a process must also be specifically designed so as to avoid both extreme theoretical rigidity or the extreme theoretical poverty that creates professionals who can operate at only the procedural level. Both of these extremes mitigate against practitioners' ability or willingness to accept and apply changes in the knowledge base. We must make every effort to again produce professionals as opposed to technicians. Such efforts will go a long way in assuring that the extended training efforts that we must attain will be subject to rigorous and valid evaluation by their consumers. We will be discussing some means for attaining these needs in a later section of this paper.

SERVICE DELIVERY SYSTEMS

The processes needed to establish and maintain service delivery systems adequate to the demands of quality services to children with severe handicaps are indeed problematic. Some of the problems involved in service delivery are the focus of one already ongoing process and, because of this, are

effectively beyond the direct control of all of us. This ongoing process is the product of Federal laws and regulations which mandate against the continued segregation of handicapped children in special facilities at either the state or local level when less restricted (i.e. more integrated) environments are warranted. The laws and regulations which undergird this particular process reflect a range of empirical, philosophical, and political factors that, at this time at least, appear difficult to challenge. Thus, it would appear that these mandates for more integrated service settings **will** be enforced. As a consequence, it would seem to me that our current efforts in the general domain of optimal service systems might better be concentrated on the factors that are either independent of the specific issues of service setting or those that might be exacerbated by the moves to integrated settings. I will be frank and state that I don't think we yet know enough about all of the variables to specify a service delivery model that would be universally applicable or universally successful. I say this because I think that the variables involved are both large in number and made even more complex by the interactions among them. This complexity is another reason that I am suggesting that the processes that we need to focus on in this current effort be those that are basic to any service setting and any service model. In this context of planning for better service delivery systems, then, I think it is important for us to recognize that the mandates for integrated settings exist and that they are based in the recognition that the primary elements of a service model must be determined by the needs of its students - particularly their need to have more normalizing experiences. However, I also think that additional processes are required in the general domain of service delivery. For example, I think that it is extremely important for us to attempt to supplement the Federally fueled, student-oriented process toward integration. Specifically, we need to recognize that the means to meeting student needs are also heavily dependent on the basic competence and psychological well-being of the professionals involved. Let me, therefore, offer a few observations about some variables associated with professional well-being for your consideration as you attack this overall area of concern. Many of these variables will be importantly affected by moves from segregated

settings and, as a consequence, must be carefully considered. Let me emphasize that these observations are in no way to be construed as a defense of segregated settings. They are simply attempts to identify factors that have always been important in assuring the delivery of quality services, but which are also those factors which might have to have even more attention in service settings which are integrated.

First of all, I view the meeting of the experiential needs of children with severe handicaps as requiring extraordinary competence and professional confidence. The educational attainments of such students are generally hard-won and occur at a pace and level which requires that the professionals involved be under the control of achievement models that are considerably extended when compared to those applied to non-handicapped students. By this I mean that student achievements of this population generally occur in units and sequences that can only be fully evaluated and, thus, appreciated if one's perspectives go quite beyond the immediate level of each attainment and the relative effort required for such attainments. I would suggest that the need for these altered perspectives is crucial for professionals working with children with severe handicaps. I would further suggest that the establishment and maintenance of such relative perspectives require an important process of constant re-calibration and validation. Historically such processes have been carried in consistent opportunities for peer interactions and consultative support activities. It seems quite possible that professionals who are working with children with severe handicaps in integrated settings might not have such benefits from their interaction with professional peers who work with non-handicapped children. Thus, attention to the specific supportive and instructional interactions that are needed by professionals working with children with severe handicaps will require special attention as the move to integrated settings is accomplished.

I would also like to suggest that productive interactions with children with severe handicaps requires high levels of both psychic and physical energy. These necessarily high levels of energy, in turn, require delivery systems that maximize the potential that these needed levels of energy will be consistently available. Service models that require professionals to

operate with no opportunities for rest and reflection militate against quality interaction levels for their students. I am convinced that many of the poor service environments that can be observed are created by the fact that, if a system doesn't specifically provide opportunities for needed relief, rest, and reflection, such opportunities will be created **in situ** by service professionals themselves. When professionals must "bootleg" their basic human need for relief by pacing themselves in ways that conserve their energies, the overall requirements of quality services are inevitably compromised and diluted. Thus, service systems must be intelligent and humane for professionals as well as for students. This means that they must be well-staffed with competent, qualified professionals and organized in ways that provide an optimal environment for quality work by these professionals.

Because I think that quality services make extremely high demands on the professionals who have responsibilities for service to children with severe handicaps, I would like to suggest one other element which might be considered within the **gestalt** of service delivery. This element might best be labeled as **professional status** or **professional recognition**. I would caution all of us not to approach this need at superficial, cosmetic levels. Rather, we must analyze those factors involved in professional status and recognition carefully and realize that they are not adequately met at simply a verbal, cheerleader level. Rather they must include high levels of **identity, reward, and nurture.** This means, simply, that as we make demands for special levels of knowledge, motivation, and ethicality; we must make concommitant commitments to develop processes that assure that these levels of attainment are recognized at all appropriate levels and in all appropriate domains. We shall return to these needs again when we begin our look at the means to our identified process ends.

I have concentrated on service delivery elements which appear crucial to the well-being of the professionals who provide quality services. First, because I think that many factors related to service delivery elements important to students' are well-represented in both the current mandates for integrated educational settings and the the experiential elements that are inherent in an such settings and by our commitment to staff our programs

adequately with competent professionals. Secondly, it is my conclusion that appropriate attention to assuring an adequate and consistently updated knowledge base assures the continued competence to design professionally appropriate instructional procedures for our students. It is my conclusion, therefore, that the elements concerned with facilitative delivery systems are most seriously lacking in their consideration of variables which have impact on professional personnel rather than those specifically concerned with students.

EVALUATION SYSTEMS

Basic to this conference is the recognition that the entire philosophy of educational services to children with severe handicaps is predicated on the assumption that we have the abilities required to produce behaviors and skills which better the lives of such children and the significant others in the environment and, as a result, assure that our society is meeting its responsibilities to all of its citizens. In addition, all of the goals and processes identified to this point are predicated on the assumption that we truly understand what **quality services** to children with severe handicaps are, and that these goals and processes that we would design will, indeed, result in services that will produce the behaviors and skills that we are committed to achieving. Thus, the goals that we are pursuing must be subjected to some process designed to provide the means to judge the overall validity of our services.

This means, simply, that our evaluation must be focused on domains and units that are consonant with our treatment goals and not be constructed in ways that select different domains and units for evaluation than those that are used to generate treatment. We are all familiar with the worst examples of this problem. This is when a system uses gains on a number of norm-referenced "milestone" developmental instruments to measure gains from a program that has been targeting truly functional, adaptive repertoires that are stated in units totally different from those used in the norm-referenced developmental instrument. Thus a child might have succeeded in acquiring non-verbal communicative responses for three performative functions but, when he/she is evaluated on stacking blocks, two word speech responses, and a simple

conservation task - no gains can be shown. Our long history of schools' use of norm-referenced, psychometric instruments makes us extremely vulnerable to such errors and these errors point the way to the need to develop evaluation instruments that are criterion-referenced and reflect our most recent emphases on the need for our educational goals to have social validity, as opposed to matching norm-referenced developmental milestones.

To be sure, in this overall process, we must be willing to empirically establish our goals' social and adaptive validity. We must also assure that our evaluation instruments are well-constructed, reliable, and valid in their measurement of our more adaptive and useful behavioral goals. When this is achieved, however, we should expect to have a collection of criterion-referenced instruments that can be administered in standardized fashion and attain face validities adequate to convince professionals (and parents) that our service systems have produced important gains in domains that will have an impact on these student's abilities to function more appropriately in their social environments.

The process directed toward these needs must reflect efforts that have a wide base which includes all levels of the educational chain. This means that it must seek collaborative efforts among local, state, and federal representatives that assure some consistency across the nation. This means good communication and networking among all of these levels. Our problem now seems to be most acute in some of the LEAs and SEAs which are trapped in past psychometric perspectives. At its most basic level, this problem would appear to be a substantive one and, thus, one that will require appropriate empirical data to support revised evaluation theory and philosophy. The process needed to provide these more appropriate evaluation approaches will require important input from academics involved in this area. Fortunately, there are a number of gifted professionals working in this area who can respond to an initiative to attack this problem at a **macro** level and, then, can feed any process developed to put these revisions in-place at the local and state levels.

INITIATING AND MAINTAINING THE NEEDED PROCESSES

At this point, I think that we must all be sharing the realization that

the goals and processes that we must consider in this conference are of such magnitude and complexity that there is no way that we can deal adequately with all of them at **micro** levels. Clearly, as we attempt to sum the implications of both David Yoder's paper and this one so far, we are seriously close to an overload if indeed we are not already shorted-out. Thus, I think that as we begin to consider the means needed to attain the processes that are pertinent to the goals and products we have identified, we might first adopt a general strategy that can be applied to all of these processes.

The first assumption that I think we should make in designing a general strategy for attaining these process goals is that approaching these needs primarily from concepts and expectations that are derived from strictly moral and philosophical bases is probably our least useful strategy and should be rather immediately suppressed. By this I mean that we should not assume that all of our targeted societal institutions will exercise **leadership** or that all of the individual professionals involved will be **dedicated**. Instead, we must become coldly pragmatic and assume that, except for some stellar exceptions, these societal institutions and individuals cannot be expected to exercise leadership and to be dedicated to attaining these needed processes. In a way, we would be assuming a "zero base line" as we begin to design treatments. The data on the current status of most of these processes would appear to confirm that, in many regions and in many substantive areas - we indeed have this zero baseline. Given this lack of generalized expectation for leadership and dedication, the focus of our treatments must be to design systems that will assure that our targeted societal institutions and professionals will be made **responsive** to the needs we are addressing. The key to assuring responsiveness is simply to identify the appropriate consequences for desirable and undesirable behaviors among these targeted constituents. Premack stated the conditions we desire quite well when he was able to get chimps to share their food by instituting a carefully designed reinforcement system. He commented that "Altruism - properly rewarded - becomes quite consistent." Thus, the working assumption that we should adopt is that our societal systems can be made to be responsive - but we must think in very practical terms about instituting the proper rewards for such responsiveness.

While it is clear that the institutions and individuals in which we wish to engender altruism are formidable, we can take heart in the fact that the entire movement for which we are now seeking rather fine-tuned support, is the result of a set of judicial and political consequences brought to bear on societal institutions. In a real sense, our current tasks are simply "mop-up" operations in the context of the major battles that have already been won on behalf of our severely handicapped students.

Let me now move to the specific areas in which we are seeking responsiveness and briefly discuss some of the "coldly pragmatic" consequences that might be functional in attaining it. I will discuss these variables under the major headings provided for this paper; namely, 1. Training needs; 2. Service delivery needs; and 3. Program Evaluation needs.

ESTABLISHING A CONTINUUM OF TRAINING

Dr. Yoder's presentation makes it obvious that today's service programs in the area of severe communicative deficits among children with severe handicaps require professionals in several disciplines who have mastered broad academic substance related to communication and language. Much of this substance has only become available in the past 3 to 5 years. Clearly, however, without mastery of this academic substance, the management procedures; the service delivery systems; and the evaluation processes cannot attain the state-of-the-art levels which we all seek. Just as clearly, however, we can provide ample evidence that this knowledge base is not fully represented in the majority of teachers and clinicians currently on-line in our programs or in the majority of current graduates of speech, language and hearing programs; special education programs ; or programs which represent other disciplines crucial to the task. This means, then, that we need to develop processes which seek responsiveness for pre-service, in-service, and continuing education programs. The fact that we need all three of these levels of training and education means that we need to have impact on each and every one of the societal institutions we identified early in this paper. We must counter the elitest trends among our college and university programs many of which are actively downgrading the human service dimension of our respective

disciplines as they seek something most of them label as "science". We must re-focus many SEAs from their preoccupation with paper and finances. We must assure that TAs are staffed with people with **substantive** knowledge in child language and communication to supplement their knowledge of generic task-analysis and systems analysis. And, we must effectively change LEA work settings in ways that not only require - but **actively foster** the continued growth and development of their professional and para-professional staff members. This means that we assure that professional associations read their codes of ethics and actively work to identify and implement changes in their respective certification and curriculum requirements in ways that will assure that their practitioners have the specialized knowledge to effectively serve the communicative needs of children with severe handicaps. And, further, that their practitioners can work with those of other pertinent disciplines in meeting these goals. This means that we assure that many LEAs must take quick leave from the "warm body" criterion for staffing the classrooms of children with severe handicaps and appoint only substantively competent professionals.

Now, how do we get responsiveness in these areas from all of these rigid and formidable institutions? We begin to seek answers to this by looking to the consequences that reward the type of responses we desire, and punish (withhold rewards) those responses that we do not desire. This means that State Certification for work with the severely handicapped is given only to the graduates of colleges and universities that have appropriate training to meet the needs for **quality treatment services**. This means that ASHA certified clinicians are only accepted for such positions if they have specific training in the communication problem areas deemed crucial to the service needs of children with severe handicaps. This means that Federal training grants for training in severely handicapping conditions are prioritized to reward colleges and universities which have instituted the processes appropriate to transmit the knowledge base appropriate to these service needs and that their preservice programs reflect awareness of these needs across several disciplines. This means that Federal flow-through moneys to SDEs are prioritized to reward carefully designed in-service training programs in communication for speech-language pathologists, special education teachers,

physical therapists and other pertinent professionals. This means that State reimbursements go to LEAs only on the basis of fully competent teachers. This means that special funds are made available to provide for the continued professional development of professionals who undertake careers in this important area. There are, of course, many more - but you get the idea.

We know that there will be screams of righteous indignation at all levels as we would implement a program of differential reinforcement. We also know, however, that these screams will be quickly drowned-out by the clacking of word-processers putting the desired responses into action. We know that people respond in the face of rewards and alter their responses in the face of loss of rewards.

ESTABLISHING APPROPRIATE SERVICE DELIVERY SYSTEMS

The barriers to designing and implementing appropriate service delivery systems are significant and somewhat more problematic than training needs. Because the final service delivery model occurs at the LEA level, there would appear to be fewer specific contingencies to manipulate. The primary contingency, of course, is State reimbursement of the excess costs of such programs and systems. With many States operating within severe budgetary constraints, there are limits to the rewards that they can offer and, importantly, limits to the degrees of freedom that they have in dispensing these reimbursement contingencies. Yet, we know, that SEAs must attend to a need to bring their reimbursement policies into line with those requirements of quality educational services to children with severe handicaps. Recommended and reimbursable staffing levels must reflect the needs for service delivery systems that treat both students and professionals intelligently and humanely. Certifications, as we noted, must further reward competence levels across many disciplines and regulations cannot deny needed and appropriate professional services to children with severe handicaps. For example, I cannot imagine the maintenance of regulations that deny a speech pathologist's services to children with severe handicaps on the basis of MA-LA gaps which are, essentially, artifacts of the evaluation instruments applied.

On strictly the professional side, ASHA and other professional associations must act as though they really mean their commitment to the communication needs of all persons by revising their curricular guidelines and certification programs to recognize the incompleteness of professional preparation that does not include the substance and practicuum that is pertinent to severely communicatively impaired children with other primary mental or physical handicaps. And, in general at both the professional association and university level we must again see counter reactions to the elitist trends that work against the professional status of those individuals who choose demanding clinical service over so-called "scientific" professional roles. Many of these efforts must come from within these institutions themselves. Consequences to reward such efforts are most likely to be Federal in their origins, e.g. grants-in-aid to carry-out new initiatives. I would suggest, too, that we not overlook the potential consequences that can come from LEAs, SEAs, and individual professionals. Truly discriminative employment practices will be felt by both universities and professional organizations who do not meet the needs in this overall domain. Competition for the professional allegiance of the professionals working with children with severe handicaps can also have an effect on professional organizations. When either colleges and universities or professional organizations can be made to face the fact that they are failing to meet the needs of some element of their constituencies, they can be made to be responsive. In a society that seems to thrive on litigation, each of us and each of the societal institutions from which we are seeking responsiveness must be ever aware of the alternatives to our own initiatives and commitments to these needed processes. Educational malpractice is quite easily established today and, if such actions can create responsiveness among the poorest of our States, they can certainly be brought to bear on our universities, LEAs, and our professional associations. It should never come to this, but if we are to prevent this approach, we must establish these processes on our own initiative.

ESTABLISHING APPROPRIATE EVALUATION

As my previous remarks on this topic indicate, I see this issue as having a basic substantive solution. Appropriate evaluation instruments must be designed and tested. I think we are close to attaining such instruments through the cooperative efforts of both academics, LEAs, and SEAs. The problem in this domain will be to assure widespread adoption of the revised evaluation instruments that are now becoming available. Such a problem is amenable to modification through contingency manipulation at both the State and Federal levels. This problem can also be considerably modified through enhanced communication among SEAs with concommitant trickle-down to the LEA levels. Essentially, appropriate evaluation must be mandated at all levels of the service chain. There are serious problems in the maintenance of appropriate evaluation data within the context of demanding clinical educational services. Teachers must have data systems and procedures that do not preempt their teaching activities. Issues like this, however, require intensive and detailed review and process designs; and, such detailed approaches are beyond the reasonable bounds of this paper - and, perhaps, even beyond the bounds of this conference. I shall be anxious to learn more about the approaches to this area that you, as individuals have brought to this gathering.

SUMMARY AND CONCLUSIONS

What we seem to be about in the context of this conference is simply to attend to the question, "Do we, as a society and as professionals, really mean it when we say that our goals and commitments are to provide quality educational services to children with severe handicaps?"

We must be able to admit that the processes need to assure such services are not yet at the levels required to meet such goals. We must be able to make the difficult decisions and apply the differential consequences that will evoke responsiveness from ourselves as individuals and from our societal institutions - particularly, our Federal government, our State Education Agencies, our professional organizations, and our local education agencies. The problems are there, but so are the bases for their solution. So, if we really mean it, we'd better get at it - there's a lot of work to be done.

IDENTIFYING THE ROLES OF MULTIDISCIPLINARY PROFESSIONALS AND PROVIDING AND EVALUATING COMMUNICATION AND AUDIOLOGICAL SERVICES TO CHILDREN WHO ARE SEVERELY HANDICAPPED

A REACTION*

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NOTE: Edited from a verbal presentation made at the Symposium. Not edited for formal publication.

Dr. McLean has given us considerable food for thought in his paper. I think we can all agree that the challenges he has given us are appropriate and that the elements he has identified as effecting successful operationalization of the multidisciplinary effort are in fact major concerns in the professions. However, I would like to expand upon and challenge some of the assumptions he has made in his paper. I plan to raise some additional concerns that can be considered as we discuss consensus statements during the rest of the symposium.

KNOWLEDGE BASE

Certainly improving our knowledge base and disseminating this knowledge base is a major concern as it relates to providing adequate and appropriate communication services for the severely handicapped. However, I do have a few questions about the knowledge base.

1. DO WE KNOW WHAT THE COMMON KNOWLEDGE BASE SHOULD BE?

We may talk about disseminating a common knowledge base, but I am not sure that we have a good handle on just what the common knowledge base really is or what it should be. There needs to be considerable research in identifying what the common knowledge base should be that is going to be appropriate for all professionals who are providing services for the severely handicapped.

2. COMMON LANGUAGE IS IMPORTANT: WHAT IS IT? WHERE IS IT?

Considerable confusion exists among professionals, parents and other care givers related to terminology that might be used in providing services for the severely handicapped. I can certainly agree that a common language is important if we are going to eliminate much of the confusion that results from miscommunication as we discuss the communication needs of and services for the severely handicapped. However, I think we need to spend considerable time analyzing the language used in the various professions as related to the severely handicapped so that we can, in fact, come up with a common language.

*The opinions expressed in this document do not necessarily reflect official policies of the American Speech-Language-Hearing Association.

3. CAN WE EXPECT ALL PROFESSIONAL EDUCATION PROGRAMS IN ALL PROFESSIONS TO INCLUDE COURSEWORK AND PRACTICUM RELATED TO THE SEVERELY HANDICAPPED IN THEIR CURRICULUM?

In speech-language pathology and audiology there are over 230 graduate professional education programs. Can we expect that all of these programs will include all of the necessary coursework and practicum to provide sufficient background for all speech-language pathologists and audiologists to work with the severely handicapped? Can we really expect that all of the teacher education programs and the other related service programs that are going to impact on the severely handicapped will include such coursework and practicum? Requiring such curriculum may be unrealistic if not impossible.

4. PROFESSIONAL EDUCATION PROGRAMS ALREADY ARE OVERLOADED.

In discussions with professional education program directors, they indicate that it currently is nearly impossible to include in their programs all of the necessary coursework to meet certification standards. This is true not only of speech-language pathology and audiology professional education programs, but in other professions as well. Many of the speech-language pathology and audiology graduate education programs are already two years plus in length. Professional education programs have many demands on them to continually include more and more coursework and practicum in the program. The private practitioners want a number of business courses added to the curriculum so that professionals are qualified to set up and manage their own private practice. Speech-language pathologists in the schools believe there should be more school curriculum-oriented courses such as teaching of reading or managing classrooms that allow them to function in self-contained classrooms for the communicatively handicapped. Individuals working with adults feel that there should be more courses and practicum experiences related to the elderly and those working with neurological disorders, or dysphagia, feel that additional coursework should be provided for them as well. It is my opinion that professional education programs are not going to be able to expand to include all of the coursework and practicum that may be necessary to provide students with the skills necessary to function as the total professional we may expect. We have to look at creative ways to expand the specialized knowledge base of professionals after they have obtained basic knowledge and skills at the preservice level.

5. DO WE HAVE SUFFICIENT NUMBERS OF FACULTY PREPARED TO PROVIDE COURSEWORK AND PRACTICUM RELATED TO THE SEVERELY HANDICAPPED?

Adding coursework and practicum related to the severely handicapped is a laudable goal. However, I question whether or not we have sufficient numbers of prepared faculty who can, in fact, provide the necessary coursework and practicum related to the severely handicapped. Granted we have several centers nationwide where students can obtain adequate and appropriate preparation. But what about the hundreds of other professional education programs in all disciplines that will need qualified faculty? Are faculty available?

6. DO WE HAVE APPROPRIATE PRACTICUM SITES?

If we are going to provide adequate and appropriate preparation for professionals to work with the severely handicapped, we need to have practicum available for them to test out their knowledge and hone their professional skills in working with this population. Certainly the severely handicapped in many areas are a low incidence population. There may not be the critical mass of individuals available that are necessary to provide necessary practicum experience. This needs to be a consideration as we recommend additional experience in working with the severely handicapped.

7. HOW MANY PROFESSIONALS REALLY WANT TO DEDICATE THEIR CAREER TO SERVING THE SEVERELY HANDICAPPED?

Even though we may have a large number of professionals that graduate from our professional education programs each year, we have to consider the number that really want to spend their time working with the severely handicapped. Individuals have a variety of reasons for going into speech-language pathology, audiology and any other helping profession. In many instances it is not to work with the severely handicapped. Therefore, we may have a limited pool of individuals who are going to need the special expertise to work with the severely handicapped and a limited pool of individuals who are going to want to spend their entire career acquiring a knowledge base necessary to provide the kinds of services that are necessary for the severely handicapped. We all agree that progress is many times slow with the severely handicapped and we may not see great changes for a considerable period of time. Many professionals cannot wait for this slow progress. They want more immediate rewards.

8. STUDENTS ARE ASKING: "WHY DO I NEED MORE EDUCATION AND GET NO MORE MONEY WHEN I START EMPLOYMENT."

As students discuss issues in the profession with me, they are continually concerned about the amount of time they must spend in obtaining a graduate degree in speech-language pathology and audiology in relation to the amount of reimbursement they obtain when they seek employment. It is frustrating, if not discouraging, for potential employees who have just completed their master's degree, where they have been told they are truly qualified professionals to go out and seek employment and be offered $13-14-15,000 for initial employment.

ADDITIONAL REACTIONS

1. <u>Specialty Programs</u>

As we explore possibilities for increasing the pool of professionals who are qualified to provide communication services for the severely handicapped we may need to look at establishing several strong professional education programs throughout the United States that have adequately prepared faculty and sufficient practicum sites to prepare specialists who are going to work with

the severely handicapped. I am not convinced that we can expect existing professional education programs to have the resources to provide all of the specialized coursework and practicum needed in the professions.

2. **Continuing Education**

Certainly we need to develop strong continuing education programs that are available throughout the United States. However, once again, we need to identify individuals who are qualified to provide this continuing education and, based on a common knowledge and common language, can provide appropriate continuing education that will prepare professionals to meet the communication needs of the severely handicapped.

3. **Altruism**

I think the altruistic philosophy as a reason for entering a profession is disappearing. It has been replaced by the reimbursement philosophy. No longer are bright, young individuals entering programs because they truly feel a need to help the handicapped. We find today that individuals are selecting professions based on the reimbursement philosophy, i.e., how much money can I make in his profession. Therefore, as I talk with directors of professional education programs they indicate that the quality of students going into the helping professions today is not as high as it was in the past. The brightest young individuals are no longer going into the helping professions but are going on into engineering, law, medicine, and other professions that pay considerably more than many of the helping professions. We need to consider this change as we discuss managing consequences, and providing incentives and rewards.

4. **Professionals vs. Technicians**

Dr. McLean's paper challenges us to produce professionals as opposed to technicians. I believe we need both. However, what I find is that many professionals are so concerned about somebody else doing their job, or encroachment on their professional practice, that they end up doing technician work just to prevent someone else with lesser skills from doing some of their work for fear that they may lose their jobs. I think this is a mistake. If we are going to be able to meet the needs of the severely handicapped, we need well qualified professionals who are identifying the needs of the severely handicapped and then developing the service programs needed. These same professionals can then train and supervise technicians to carry out the programs.

5. **Certification and Curriculum Standards**

Dr. McLean also challenged professional associations to look at certification and curriculum requirements as related to the severely handicapped. I am sure that many associations are doing this on a continuing basis. The American Speech-Language-Hearing Association currently is analyzing its certification standards in relation to the jobs that are being done by speech-language pathologists and audiologists in various employment settings. I think it is important that certification standards and curriculum/practicum requirements

are based on an in-depth job analysis so that we can ensure that the professional education received by professionals will relate to the jobs they are expected to do.

ASHA also has conducted a graduate and undergraduate education conference to discuss possible changes in professional education curriculum. Prior to the conference, meetings were held throughout the United States asking individuals what they believed were the knowledge and skills needed to adequately provide services for the communicatively handicapped. These were analyzed, synthesized, discussed, worked and reworked and, as a result, a considerable number of recommendations for modifying the curriculum in speech-language pathology and audiology have been proposed. Hopefully those individuals who are working with the severely handicapped were able to get information into those proposals what would improve the quality of instruction as it relates to the severely handicapped.

Also, each association does in fact review current certification standards and curriculum requirements based on member and consumer concerns. Most associations have a procedure for modifying their policies based on the concerns of members. If those individuals working with the severely handicapped have concern about the inadequacy of the curriculum requirements or certification standards as may be promoted by a professional association, they certainly need to convince their policy making colleagues that there is a need for a change in the professional education requirements and get involved in the process to change the policies related to certification/curriculum requirements.

There are many associations that are involved in leadership training, i.e., providing information to professional education programs and faculty at universities that will enhance their ability to provide information to students related to the severely handicapped. Currently, ASHA is developing training modules that can be used in universities to provide an improved knowledge base in the area of augmentative communication.

The problem that we may have, as I view it based on my discussions with professional education program directors, is that they see their professional education program as the minimum amount of knowledge that is needed to become a professional. They see a speech-language pathologist is a speech-language pathologist is a speech-language pathologist; or, a professional is a professional is a professional, and their job is to develop this professional, provide them with an adequate knowledge base and the skills necessary to enter the profession. Professional education programs cannot be all things to all people. If individuals want to specialize in an area, then it is going to be up to them to acquire the specific knowledge that is necessary to become an expert in adult language disorders, neurological disorders, working with the severely handicapped, or any other specialty area.

Unfortunately, education has not arrived at the place business has in relation to knowledge and skills. Business will say "We don't care what kind of a degree you have, just come and work with us and we will train you to do the job we want you to do." However, when a student from the helping professions is employed, the employer assumes that having just completed a master's

degree in speech-language pathology, or other profession, the individual is a qualified professional. They don't expect to have to spend another six months to a year training that individual to do the job they want them to do.

We have this kind of Catch 22 in that the professional education programs cannot adequately meet the needs of professionals in all areas, but at the same time there are limited opportunities for continuing education once the person is employed.

In relation to professional associations and putting pressure on them to modify their curriculums and certification standards, it is important to remember that professional associations are made up of members and that change occurs because members want it. Therefore, the policy makers of an association must be convinced there is a need for change. If there is going to be a change in the certification standards of professional associations or curriculum requirements that are required in professional education programs, it is going to be those individuals who are working in areas such as the severely handicapped, who are going to have to convince those members that are elected to establish association policy that there is a great need for change.

Also, it is important to note that there is no association policy that prevents professional education programs from providing coursework and practicum related to the severely handicapped. Granted, ASHA does require certain kinds of coursework and practicum experience. However, there is nothing to preclude a professional education program from providing this coursework related to the severely handicapped or from providing the required practicum experience working with the severely handicapped.

It may be that what we need to is begin to counsel students in career life planning as they enter the program and have them begin to make choices about the kinds of clients they want to serve as a professional so that they are able to select and elect the kinds of courses that are going to prepare them for the specialized work they will be doing when they graduate from the program. Unfortunately, most individuals don't know what they really want to do professionally in terms of specializing until after they have a few years of experience. By that time it may be too late to provide them with the adequate background that they need to provide the quality services needed by the severely handicapped.

6. **Position Statements**

I find associations develop all kinds of position statements. We can develop all the position statements in the world but if nothing is done with those position statements, then nothing will ever happen. The American Speech-Language-Hearing Association has numerous position papers including a position statement on nonspeech communication and a position statement on serving the communicatively handicapped mentally retarded individual. Position statements typically discuss the roles of professionals in providing services, professional ethics that are involved, research needs and the professional education necessary to work in the area of concern. However, what happens after these position statements are published? If individuals do not take them to their

university faculty committees that can change curriculums, or to their local school administrators and state and federal policy makers, then there is probably going to be little change that occurs because of these position statements. Position statements have no impact if they just are printed in the journal and no one uses them or follows up on the recommendations that have usually cost a considerable amount of money and professional time to develop.

To summarize my reaction to Dr. McLean's section on knowledge base, I think we need to identify the knowledge and skills needed to serve the severely handicapped; identify who can provide the needed information; and identify where the information can be obtained, both at the preservice and continuing education level.

SERVICE DELIVERY

Dr. McLean discusses factors that impact on how we deliver services. Many of the external factors are in fact involved with laws and regulations implemented at the state and federal level. However, I don't think we can continually blame federal laws and regulations for all the problems we might be having in providing adequate and appropriate services for the severely handicapped. As I analyze state and local policy related to providing services, I find that they many times exceed the federal mandates. Many of the problems individuals have in providing adequate and appropriate services are because the state and local policy requires extraordinary activities that are not mandated at the federal level. I think it is important for individuals seeking change to know the difference between federal, state and local policy. With this knowledge they can determine whether changes need to be made at the federal, state or local level to allow them to provide the kinds of services they want to deliver. It is my perception, as opposed to Dr. McLean's, that these policies are not beyond challenge. What we need to do is get involved in the political process so that we can change some of the legislative and regulatory barriers that may be impeding our ability to provide adequate and appropriate services for the severely handicapped. I find that many individuals are so involved in the clinical aspects of the profession that they forget the political/policy aspects. It is my opinion that we can probably improve the quality of services and our ability to provide appropriate services faster by changing the policy surrounding how we delivery services rather than going back and taking more courses in assessment and intervention. No matter how great we are clinically, if the policy doesn't allow us to do our job, then we aren't going to be able to do great clinically. We need to get involved in the policy-making process.

Burnout is a problem as Dr. McLean has suggested. We do in fact need creative work environments and need to have creative rewards and incentives available for individuals who dedicate their career to working with the severely handicapped.

However, there are some problems we are going to face.

1. Stereotypes

There are many individuals at the administrative level making policies who still believe that speech-language pathologists can see 100 kids twice a

week and that we only work with children who have mild articulation disorders. Certainly, in some agencies this is changing. But we still find many individuals dictate that speech-language pathologists have to carry high caseloads with minimum frequency and intensity. We need to get around some of these old stereotypes.

2. **Negotiated Contracts**

In discussing creative work environments and providing rewards for professionals, one argument that comes up from many administrators is that "I can't do that because we have a negotiated contract (or collective barganining agreement) that does not allow us to provide differential rewards to staff. If I do it for one, I have to do it for all." We are finding that it is difficult to pay professionals working with the severely handicapped more because they are doing more intense work, or give them more time off for continuing education, or give them the thinking time they need or the time they need for stress management when such items are not included in the negotiated contract. This is a problem we need to explore.

Also, employers want staff who can do the job. They do not want staff who sit around and think about how the job should be done, reflect on it, or study it at considerable length before they do anything. Employers have hired an individual to carry out a task and they expect that individual to be qualified to carry out that work. They want them spending their 8-hours a day putting in direct work with the children without spending a lot of time thinking or reflecting on it.

3. **Tradition**

Tradition dictates that we have been doing it this way for 10-15 years, why should we change now. We need to take a look at the traditional ways of doing things and become much more innovative. Although disability professionals may be very innovative, some of the agency administrators and board of directors are not quite as innovative and we need to provide them with information on better ways to do things.

4. **Mandated Caseloads**

There are some states that still mandate that professionals carry a caseload of 60-70-80 individuals. It is beyond my comprehension how you can provide services based on the individual needs of students when the state rules and regulations require that you arbitrarily provide services to a specified number of students. Certainly many of you, as state education agency consultants, have a responsibility to try to change your state's rules and regulations to allow individuals to provide adequate and appropriate services for the severely handicapped with communication disorders.

We must remember that change costs. Any time we make a change it is going to cost some way. It may cost in more personnel needed, in facilities or materials and supplies, etc. However, if we are going to have change, we are going to have show individuals who make policy how we can be creative without

big increases in costs. There are probably some changes we can make in programming, use of professionals, use of assistants, and in work environment that would not necessarily cost that much.

EVALUATION SYSTEMS

Dr. McLean has challenged us to develop better evaluation systems to monitor service delivery related to the severely handicapped. We can all agree that this is needed. However, we are dealing with a considerable attitude problem that in many instances prevents the development of such evaluation systems. Unfortunately, many professionals do not want to collect data. They believe that they can carry out their activities and show progress is being with individuals based on their own intuition of how well the individual is progressing at any one time. Therefore, when you ask them to collect data on behavior change, they view this as an affront to their professionalism and their ability to do what they have been prepared to do. In my opinion, it is necessary to collect data on any program or clinical activity we are engaged in no matter what our professional philosophy may be. If we are going to make appropriate decisions about the programs and services children need, severely handicapped or not, we do need to collect data.

Dr. McLean has discussed using criterion-referenced measures. It may be that we need to revisit the use of instructional/behavioral objectives. I think we can develop meaningful objectives that includes specific criterion levels that can be evaluated for completion on an incremental basis. Unfortunately, many objectives include arbitrary criterion levels that are measured on a "did we accomplish this or not accomplish this" basis. We must collect data to show out that we made 25% progress or that we made 40% progress during a period of time. We can revise our thinking about criterion levels and objectives and how they are evaluated to make them meaningful in evaluating our programs and services.

MULTIDISCIPLINARY APPROACH

Dr. McLean has used a number of key words in his presentation.

- o multidisciplinary approach
- o cooperation
- o coordination
- o alternatives
- o change
- o make commitments

My question is "Are we ready for all of these?" Do we really want to coordinate and cooperate? Are we ready to make a commitment? We talk about the multidisciplinary approach but can we forget turf? Can we really accept that multidisciplinary approach? Are we ready to let others get involved in our work? Should we move on to a transdisciplinary approach? I define a transdisciplinary approach as looking at the knowledge and skills needed to do the job rather than the titles and degrees the professionals have. It may be that for a specific child who needs a certain behavior change in their communi-

cation skills, the speech-language pathologist may not be the person who has the skill to change that particular behavior. It may be another professional. Are we ready to accept that someone who does not have a degree in our particular profession is qualified and able and has the knowledge and skills to carry out that particular activity. A transdisciplinary approach is something to think about.

The American Speech-Language-Hearing Association and The Association for the Severely Handicapped and a variety of other association should get together to coordinate efforts to develop policy, position, and guideline statements as related to providing programs and services for the severely handicapped. I propose that we establish a National Joint Committee on the Severely Handicapped. It would include representatives from professional associations, parent advocacy groups, disability organizations, and state and local policy makers who would develop coordinated position statements and guidelines on issues such as definition, personnel preparation, delivery of services, evaluation, continuing education, and other issues of concern related to providing services for the severely handicapped.

ATTITUDES

In my opinion the greatest deterrent to implementation of the kinds of recommendations that might come out of this particular conference has to do with attitudes. These are attitudes of acceptance or rejection of the belief that we can improve communication skills of the severely handicapped, or that we should provide services or that they deserve services. Unfortunately, in some instances we are still dealing with attitudes suggesting that the severely handicapped aren't worth all the money and time necessary to meet their needs; and because they aren't going to make that much improvement anyway, we can better spend our time working with individuals who are going to fit into society. We have to change some of those attitudes before we can make any quantum leaps in the kinds of programs and services that are necessary for meeting the needs of the severely handicapped.

If we are going to change attitudes, there are things we need to consider:

1. Changing attitudes will be difficult.

2. Changing attitudes will take considerable time. We are dealing with attitudes that have been developed since childhood and are pretty ingrained in many adults.

3. We will need to engage in careful preparation to change attitudes. Documenting what we are doing, collecting data to show that change can occur, and preparing the individuals that we want to change over a period of time all are necessary activities.

4. We need to realize that trying to change attitudes can produce more resistance if they are challenged directly. Direct challenges may cause individuals to dig in and resist even more as we try to make appropriate changes.

There are some things we can do to prepare to change attitudes.

1. **Showcase our exemplary programs**

   There are lots of good things going on related to providing communication skills for the severely handicapped in many areas throughout the United States. Many people don't know what or where things are happening. We need to come up with procedures and networks that will allow us to, on a national basis, identify those programs that are doing well and then make these programs available for dissemination through some type of national technical assistance/information program.

2. **Collect data that show meaningful progress can be made with the severely handicapped.**

   Individuals that believe the severely handicapped cannot learn need to be shown that learning can occur and that the progress can be made if we provide the right kinds of programs and services.

3. **Model appropriate behavior in relation to the severely handicapped**

   We, as individuals, who are concerned with the severely handicapped must serve as good models. Whether this modeling is in relation to providing direct clinical services, doing research, changing policies, or whatever the area might be, we must serve as good models if we are going to change attitudes.

4. **Get involved in the change process**

   No one else is going to do it for us. Attitudes are not going to change because we at this conference say they should. We need to get involved in making sure that change does occur.

SUMMARY

So, the question is - "Are we ready?" I think so, but we have to make the hard decisions about what kinds of programs and services the severely handicapped need and deserve, what kinds of professionals are going to serve them, what kinds of changes need to be made in our professional education programs, what kinds of continuing education needs to be made available, what kind of money needs to be put behind these programs, what kinds of certification changes need to be made and what kinds of attitudes need to be changed among a whole list of other issues. These all are tough decision but someone has to make them before we can move ahead. As Dr. McLean indicates, we need to make a commitment and get at it. There is lots of work to be done!

REACTIONS TO MCLEAN PAPER

by

William Geiger

I. Assumptions

There are several assumptions which guide my comments on Jim McLean's paper:

A. Educational services are mandated for all students with handicaps. The parameters of these services are:

1) all special education and related services that are needed must be provided;

2) parents participate in the process;

3) due process procedures exist to help resolve disagreements;

4) services are delivered in the least restrictive settings.

B. We have a long way to go toward providing appropriate services to students with severe handicaps.

C. Attitudes exist which hinder progress toward the goal of appropriate services for children and youth with severe handicaps.

D. There is a lack of clarity/consensus regarding which students have/have not severe handicaps (multiplicity of definitions).

E. Students with severe handicaps are a very small percentage of the population and are a heterogeneous population.

F. Services to students with severe handicaps are more costly than services to other students.

II. Systematically Organizing the Delivery of Educational and Related Services to Students With Severe Handicaps.

A. Plan (This should be an initial, deliberative step; it

appears to have been frequently overlooked.)

1) Representatives from educational agencies, other agencies that serve persons with severe handicaps, professional organizations, institutions of higher education, and parents/advocates should be involved in the development of a plan for educational services to students with severe handicaps within a State.
2) This plan must address all of the parameters in the State and Federal regulations.
3) The plan should require also that LEAs develop a similar document.
4) The plan would be comprehensive: it would address administrative procedures, the specifics of service delivery, personnel preparation/staff development, and evaluation of its major dimensions.
5) The plan should be realistic, diplomatic, economical, consistent with Federal and State parameters.
6) Without a plan, services will be uneven and fragmented.
7) Without a plan, evaluation and activities have no focus.

B. Implement

1) Design Service Programs (By understanding the characteristics of the Service Delivery system, we will be better able to prepare personnel who can make the system work effectively.) Characteristics of the Programs:

a) implemented in the least restrictive settings

b) instruction delivered in natural environments

c) integration of services that will enhance communication, self-care, and other motor-based skills

d) descriptions of models for teamwork by professionals from a variety of disciplines in providing services to students with severe handicaps:

- models may be other than what is traditionally thought of as 'multi-disciplinary'
- models would be appropriate for use by LEAs with many or few students with severe handicaps
- models must be clearly and operationally defined so that administration questions regarding funding and workloads can be answered.

e) descriptions of administration practices that will support the models for delivery of services:

- funding
- ratios of staff:students
- certification of personnel; competencies needed by persons to function in the service delivery system
- networks that will exist to support team members to function effectively in integrated settings.

f) services to parents

- counseling - when, by whom, cost
- instruction - when, by whom, costs

g) services to young children with severe handicaps

- funding - provided by whom

2) Preparation of Personnel (to perform competently in an integrated service model).

a) Identification of the knowledge base and skills needed to provide services to students with severe handicaps

- may not be able to assume that the knowledge base has been identified or that the competencies to provide services in integrated, natural environments are clear
- theoretical differences exist; e.g., developmental vs functional model

b) Preservice Preparation - Communication Specialists

- base developed at preservice level with inservice education used to assure ongoing staff development
- all students being prepared as professionals in the area of communication should have some structured exposure to persons with severe handicaps as part of their preservice training;
- preservice programs could offer the option of a track that specializes in the development of communication skills by persons with severe handicaps

- preservice programs should emphsize skills needed to function as a consultant to special education teachers, other professionals, and parents; to provide itinerent services; to function as a member of a team of professionals in an educational setting.

c) Preservice Preparation - Special Education Teachers

- universities may need to emphasize cross disciplinary training to assure that special education teachers can adequately program for students with severe communication problems;
- may require that departmental and college borders be reexamined, procedures for determining workloads and funding positions be evaluated and priorities within universities be realigned to emphasize teaching.

d) Inservice Education

- planned program to assure that personnel who work with students who have severe handicaps possess and maintain the basic skills needed to provide effective programming in communication;
- inservice program should enhance existing skills and introduce "state of the art" practices;
- the Comprehensive System for Personnel Development of the Part B State Plan should address such inservice training;
- inservice programs should include strategies

and practices that support service providers who are working in integrated settings. Many of these professionals feel isolated and need ongoing, periodic assistance to help prevent burnout.

3) Evaluate - Some major headings for an evaluation system to address:

a) Attainment of the goals of the Plan - one piece of which would be the improved performance by students;

b) Related program effects;

c) Consumer reaction;

d) Cause-effect relations;

e) Cost-effectiveness;

f) Needed changes - in the Plan and in personnel preparation programs;

g) Communicate the results of the evaluation of the Plan.

4) Strategies

a) Federal resources - use to assist States to develop/realign educational and related services to students with severe handicaps.

b) Nondiscretionary funds -reemphasize the concept of the Second Priority children for the use of Part B moneys.

c) Nondiscretionary funds - require the States to submit a comprehensive plan for educational and related services to students with severe handicaps as part of their Part B application.

d) Require that States submit a master plan for inservice training for professionals who serve students with severe handicaps.

e) Discretionary funds - use to fund grants to assist States develop overall plans for the delivery of services to students with severe handicaps;

f) Discretionary funds - target discretionary moneys from a variety of programs on the issue of developing/improving services for students with severe handicaps, e.g., Personnel Preparation, Model Programs, Research, Regional Resource Centers, Technical Assistance.

g) Advocacy action - reappraise State certification and licensure to assure that they are reflective of the skills needed to provide instruction to students with severe handicaps.

h) Advocacy action - pressures by organizations of parents and professionals can help assure that students with severe handicaps receive adequate educational and related services.

Where there is a will there is a way.

REACTIONS TO MCLEAN PAPER

by

Lee Gruenewald

I would like to focus my remarks on the concept of service delivery systems put forth by Jim McLean and Dave Yoder for the severely handicapped children and youth from a district public school perspective.

If we expect severely handicapped students to live, work, play, and communicate in a heterogeneous society, it is the school's responsibility, then, to teach them in heterogeneous environments. In order to implement this responsibility, the schools must design service delivery systems based on a set of beliefs and purposes which will foster the development of skills and behaviors of severely handicapped students so they can live, work, and play in the real world.

I believe that the development of and evolving structures for service delivery systems must be based on a framework that includes five components. These five components are:

1. A philosophical base or belief statements (values).
2. Statements of purpose.
3. Organizational structures.
4. Patterns of interaction.
5. Evaluation.

I would like to express some of my beliefs in "if then" statements. The implications for these beliefs have ramifications in areas of budget, personnel, organization, programming, attitudes, and patterns

of interaction. Hopefully, some of these belief statements will be discussed as part of our deliberations in the small groups this afternoon. Several of my belief statements that affect a service delivery system are:

- If we believe that a goal of a school district is to provide one integrating instructional program with options for all students, then -
- If we believe that no child is too handicapped for placement in an appropriate educational program in a public school with nonhandicapped peers, then -
- If we believe that all students should be in chronological age appropriate environments, then -
- If we believe that all special education programs must be a part of the school district's total instructional program and not operate as a parallel system, then -
- If we believe there must be an articulation of curriculum K-12 and 3-21 and that what we teach and how we teach is based on continuous assessment, then -
- If we believe that placement in a special education program must be determined by ecological assessment, then -
- If we believe that communication is the goal of the instructional program in the domestic community vocational and leisure recreation areas, then -
- If we believe that parents must be involved in the assessment and educational process as well as the transition from school to the post-school settings, then-

These beliefs form the foundation for setting the purposes, building the organizational structures, and developing the interaction patterns for a service delivery system serving severely handicapped persons.

When Dave Yoder spoke of service delivery systems he emphasized the top-down approach, whereas Jim McLean emphasized thebottom-up. I believe that in the public school setting both approaches are valid and necessary. One cannot implement a program for integrating

for integrating children in a variety of environments unless the Board of Education, Superintendent, administration, principals, and teachers support the concept of integrating (top-down). On the other hand, in order to gain ownership for an integrating service delivery system in a public school setting, one must simultaneously focus on the bottom-up approach. That means that those people who must implement decisions must have a voice in the decision-making process which translates into teams of represented professions working on a common set of purposes. The development of representative teams assists in developing a common language for building the structures and developing the interaction patterns for purposes of assessment, placement, staff development, management, and support systems. Integrating a school system takes considerable time; in fact, it may be administratively inefficient compared to an authoritarian or centralized approach. The outcomes from both approaches are extremely diverse. While an imposed centralized approach tends to result in compliance and short-term gains, efforts predictably diminish, over time, from lack of ownership. The outcomes from the point of view of "integrating", however, are participation, ownership, and trust which result in better problem solving and commitment to the goal. The concept of integrating becomes active and leads to a system, over time, that becomes more responsive to problems and solutions and becomes pervasive in how people think and behave in all aspects of the educational enterprise.

Dave Yoder alluded to the fact that we, as professionals, must become more skilled in marketing. As an administrator in the public

school system, I have become extremely aware of obtaining skills and am beginning to follow the literature in business which has tremendous implications for how we manage the service delivery system in a public school setting.

I would like to end with a quote by Kanter (1983) in her book, The Change Masters:

> "I found that the entrepreneurial spirit producing innovation is associated with a particular way of approaching problems that I call 'integrative': the willingness to move beyond received wisdom to combine ideas from unconnected sources, to embrace change as an opportunity to test limits. To see problems integratively is to see them as wholes related to larger wholes and thus challenging established practices - rather than walling off a piece of experience and preventing it from being touched or affected by any new experiences." (page 27)

I hope that this quote will provide further stimulus for our discussions and deliberations of our assigned tasks this afternoon.

Thank you.

SECTION III

CONSENSUS STATEMENTS

- Assumptions
- Program Development
- Personnel
- Service Delivery
- Parents
- Research

CONSENSUS STATEMENTS

The following 33 Consensus Statements are the outgrowth of individual and group-as-a-whole discussions during the symposium, Children and Youth With Severe Handicaps: Effective Communication.

Organization of These Consensus Statements:-

The 33 Consensus Statements are presented under one of six titles:

I	Assumptions
II	Program Development
III	Personnel
IV	Service Delivery
V	Parents
VI	Research

The reader will find some of these 33 Statements could be listed in more than one of the six categories. Further, one might say, "But that Statement refers to an action that is mandated under PL 94-142." The participants to the symposium would agree. There was a belief, however, that some mandated subjects needed to be restated here as a firm commitment by the attendants. An example of this is the category, Parents. The symposium members felt it appropriate to state, once again, that parents be considered paramount in the development of their child's communication.

Also, there may be a subtle difference between the symposium Consensus Statement and a statement which appears in PL 94-142. For example, note the difference between the PL 94-142 mandated years for education of the handicapped and that presented in Assumption Consensus Statement 1.

Definitions:-

Definitions are of importance in any Proceedings. The reader has

been alerted to the definition used for 'severely handicapped' at this symposium and this definition is found in another area of this publication. The ages included in this definition during the symposium were from birth through 21 years of age.

Another definition concerns "Consensus Statements." Each of the following 33 Consensus Statements obtained the endorsement of all or most of the participants.

The definition for "functional communication" as used in these Consensus Statements is:

1) the ability to communicate for a variety of purposes relevant to the individual's life experiences;
2) the ability to use a variety of means (e.g., verbal and/or nonverbal) to accomplish these purposes effectively;
3) the ability to initiate and maintain social interactions as a critical dimension of communication.

"Children and Youth With Severe Handicaps":-

The editor of these Consensus Statements was tempted to streamline the text by stating at the onset that each and all of the Statements herein refer directly to children and youth with severe handicaps, thus dispensing with this clarification in each appropriate Statement. Experience has shown, however, that editors are not knowledgeable of all settings at which these Consensus Statements may be used or in what format they might appear; further, redundancy has its place in a reader's world. Through the consistent exposure to "children and youth with severe handicaps" (or versions of same), it is hoped the reader is assured that no one age of severely handicapped persons, 0-21 years of age, should be ignored in the development and enhancement of communication skills.

The Beginning:-

These Consensus Statements are not finite nor did the participants feel this symposium was the end of a chapter in the pursuit of developing and enhancing communication skills of and with children and youth who are severely handicapped. The symposium and these Proceedings are only a beginning.

It is hoped that there will be further meetings on the subject, Children and Youth With Severe Handicaps: Effective Communication. In the meanwhile, the reader is encouraged to use any and all of this material to advance the communication welfare of children and youth with severe handicaps.

CONSENSUS STATEMENTS

I. ASSUMPTIONS

1) Free appropriate public education shall be available to all children and youth with severely handicapping conditions from birth through age 21.

2) Educational services for severely handicapped children and youth shall be provided in the least restrictive environments.

3) Development of communication skills - preverbal, nonverbal, and verbal - is basic to education.

4) Communication programs for children and youth who are severely handicapped shall be provided within and functionally oriented in terms of the home, school, social, recreational, leisure, and vocational environments. These programs for and the communication skills of severely handicapped children and youth shall be evaluated within each of these environments.

5) The delivery of instruction and services for communication skills to severely handicapped children and youth shall incorporate the knowledge, skills, and experiences of a variety of individuals such as parents, teachers, peers, speech-language pathologists, occupational therapists, physical therapists, audiologists, nurses, physicians, and employers.

6) It is recognized that individuals with severe handicaps often develop unconventional and socially inappropriate means to communicate; therefore, communication assessment and programming should acknowledge the functions served by

such behavior, and should strive to help these individuals to communicate in more conventional and socially acceptable ways.

7) Educational activities should not use procedures that cause children and youth with severe handicaps to appear infantile, devoid of personal preferences, or incapable of enjoying or carrying out activities that are routine for their nonhandicapped peers.

8) There is need to place a high priority on the development of communication programs for severely handicapped children and youth.

II. PROGRAM DEVELOPMENT

1) Each State should have in place a program to identify from birth, or at the age of onset, children and youth who have severely handicapping conditions.

2) Each State should have a Statewide plan for the delivery and assessment of services for the communication development of children and youth with severe handicapping conditions.

3) A national network should be established to provide technical assistance in: a) assessing the communication skills of severely handicapped children and youth; b) planning and evaluating the effectiveness of programs; c) developing interagency coordination; d) disseminating relevent information and research.

4) The American Speech-Language-Hearing Association and The Association for Persons With Severe Handicaps shall be asked to coordinate an interagency task force for the preparation and dissemination of statements setting forth parameters of responsibilities for the development and enhancement of functional communication behavior of severely handicapped children and youth.

5) Federal, State, and private agencies shall be encouraged to issue Requests For Proposals (RFP's) to develop service delivery models specific to the acquisition and enhancement of communication skills by children and youth who are severely handicapped.

III. PERSONNEL

1) Competencies necessary for personnel delivering communication services to children and youth who are severely handicapped must be identified.

2) Preservice and continuing education programs, based on identified competencies, should be developed for personnel in communication skill programs for children and youth who are severely handicapped.

3) Personnel who work with severely handicapped children and youth shall be trained to incorporate communication skills into the curricula and to share responsibility for teaching these skills.

4) Processes must be developed to achieve positive change in knowledge and attitudes toward the delivery of services for communication skills through team models in functional environments as differentiated from isolated therapy for children and youth who are severely handicapped.

5) Families of children and youth with severe handicaps should be provided instruction in ways to assist in the development and enhancement of communication skills.

6) State and local education agencies should be committed to ongoing inservice education of team members who are providing services for the development and enhancement of communication skills for children and youth who are severely handicapped.

7) State and local education agencies should develop systems to

provide ongoing professional and personal support, which include incentives, rewards, and recognition, for those personnel providing services needed to improve the communication skills of children and youth who are severely handicapped.

8) Individuals who prepare speech-language pathologists should be provided opportunities and incentives to enhance their knowledge and skills in the area of effective communication programming for children and youth with severe handicaps.

9) Preservice preparation programs for speech-language pathologists should include information about and experiences with children and youth who have severe handicaps.

10) There is a need for ongoing information reporting the supply-and-demand of the various types of personnel to deliver services to assist children and youth who are severely handicapped in the development of communication skills.

IV. SERVICE DELIVERY

1) A statement of philosophy shall undergird each model developed for the delivery of communication services for children and youth who are severely handicapped.

2) Communication programs for children and youth who are severely handicapped should be based on the expansion of skills rather than be focused on deficits.

3) The home environment shall be recognized as a critical setting for the delivery of services for the development of communication skills for infants and preschool children who are severely handicapped.

4) Programs for children and youth with severe handicaps should use the resources available in home environments for the development and implementation of communication.

V. PARENTS

1) Parents, or those who fulfill the parents' role, are considered an integral part of the team involved in the development of communication skills for children and youth who are severely handicapped.

2) Parents should be provided support in the acceptance of integrated environments for severely handicapped children and youth.

VI. RESEARCH

1) There should be identification of materials, procedures, and learning styles specific to the individual development of communication by children and youth who are severely handicapped.

2) Research is needed to validate procedures for assessing communication functions and social interactions in order to guide the selection of interventions and to evaluate their effectiveness.

3) There should be evaluation of the application of technology in the development of communication by children and youth who are severely handicapped.

4) Federal, State, and private agencies should issue Requests For Proposals for research and demonstration projects specific to the development of communication skills for children and youth who are severely handicapped.

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